December

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AMAZING STORIES

Scientifiction by:

A. Hyatt Verrill

Harl Vincent

Clare Winger Harris & Miles J. Breuer, M.D.

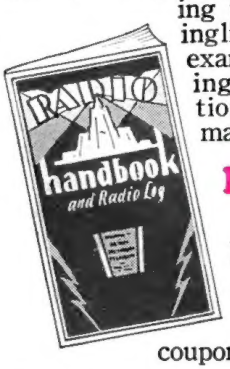
4 of the 40 Easy Ways to Make $3.00 an Hour In Your Spare Time in RADIO

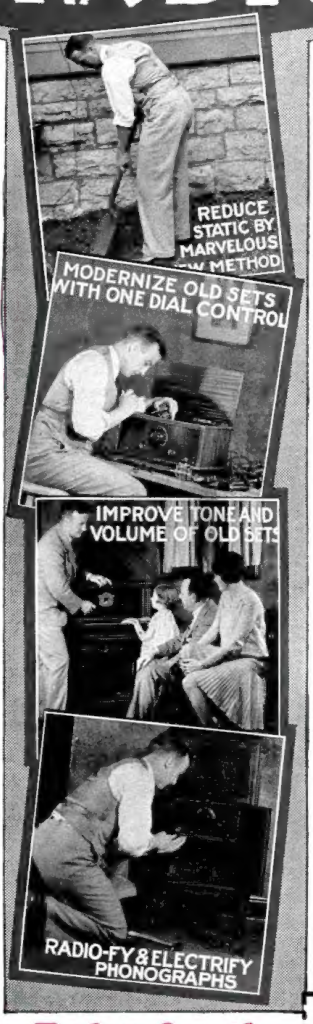
THE four plans shown are but a sample of the many ways in which our members are making $3.00 an hour upwards, spare time and full time, *from the day they join the Association.* If you want to get into Radio, have a business of your own, make $50 to $75 weekly in your spare time, investigate the opportunities offered the inexperienced, ambitious man by the Association.

Our Members Earning Thousands of Dollars Every Week

The Association assists men to cash in on Radio. It makes past experience unnecessary. As a member of the Association you are trained in a quick, easy, practical way to install, service, repair, build and rebuild sets—given sure-fire money-making plans developed by us—helped to secure a position by our Employment Department. You earn while you learn, while you prepare yourself for a big-pay Radio position.

The Association will enable you to buy parts at wholesale, start in business without capital, help you get your share of the $600,000,000 spent annually for Radio. As a result of the Association, men all over the country are opening stores, increasing their pay, passing licensed operator examinations, landing big-pay positions with Radio makers.




REDUCE STATIC BY MARVELOUS
MODERNIZE OLD SETS WITH ONE DIAL CONTROL
IMPROVE TONE AND VOLUME OF OLD SETS
RADIO-FY & ELECTRIFY PHONOGRAPHS

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It is not only chock-full of absorbing information about Radio, but it shows you how easily you can increase your income in your spare time. Mailing the coupon can mean $50 to $75 a week more for you.

Radio Training Association of America
4513 Ravenswood Avenue Dept. RN-10, Chicago, Illinois

Below are a few of the reports from those now cashing in on the "40 Easy Ways"

Clears $3,000.00 Frank J. Deutch, Pa. — "Since joining the Association I have cleared nearly $2,000.00. It is almost impossible for a young fellow to fail, no matter how little education he has, if he will follow your easy ways of making money."

$1,100.00 in 6 Weeks J. R. Allen, Calif. — "Have done over $1,100.00 worth of business in the last 6 weeks. Next month I am going to open up a store of my own. I never knew that money could come so fast and easy."

$25.00 a Week Spare Time N. J. Friedrich, N. Y.—"I have averaged $25.00 a week for the last 7 months even though I am not a graduate but just learning."

Training Lands Him Job R. C. Kirk, N. C.—"Your training has been very valuable to me. I landed a job with the big department store out here a few weeks ago because I had my membership card with me. There were a large bunch of applications ahead of me."

ACT NOW
If You Wish NO-COST Membership

For a limited time we will give to the ambitious man a No-Cost Membership which need not—should not—cost you a cent. For the sake of making more money now, and having a better position in the future, mail coupon below *now.* You'll always be glad you did.

Radio Training Association of America
Dept. RN-10, 4513 Ravenswood Ave., Chicago, Ill.

Gentlemen: Please send me by return mail full details of your Special No-Cost Membership Plan, and also a copy of your Radio Handbook.

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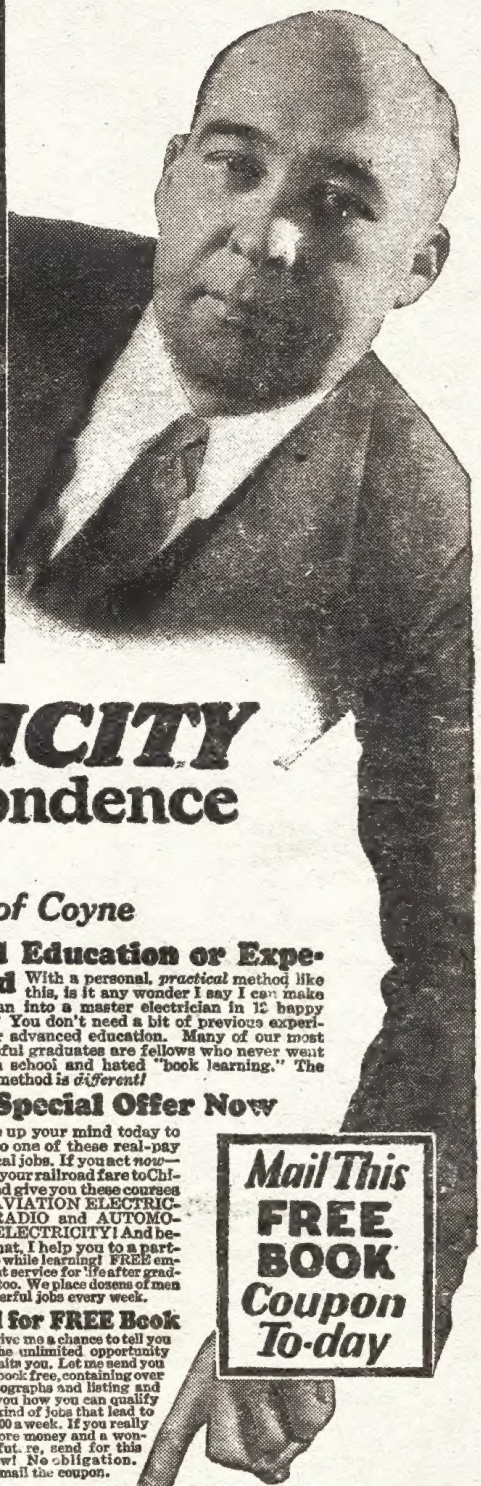
Address .....

City ..... *State* .....

Are You Caught Behind the Bars of a "Small-Time" Job?

Why be satisfied with a "small-time" job at low pay? Why grind along at tiresome, uninteresting work with long hours and no future? Why take orders all your life from every Tom, Dick, and Harry who happens to be your boss?

Right now—this very minute—you hold the key to REAL SUCCESS in your hand. Hundreds of other men before you have read of COYNE just as you are doing now—and are making $60—$75—$150 a week as a result. This is your BIG CHANCE to get friendly help and practical training that will enable you to climb out of the rut, and EARN REAL MONEY! Don't miss it! Today may be the big turning-point in your whole life!



LEARN ELECTRICITY
Without Books or Correspondence
IN 12 WEEKS
By Actual Work—in the Great Shops of Coyne

SOME kinds of jobs ought to be labeled with a big sign that says "Man-killer." They are either so heavy, dirty and hard that they sap a man's strength and keep him dog-tired all the time—or else they are so disagreeable, uninteresting and poorly paid that they kill his ambition in almost no time. And AMBITION is the most valuable thing a man can have!

Fascinating Work—Real Pay!

That's why so many men are turning to ELECTRICITY, which offers unlimited rewards and opportunities—with ordinary salaries of $50—$75 and up a week! Right now big electrical jobs are actually going begging! Electrical experts are in demand—and the need is growing every day! The situation is one that spells O-P-P-O-R-T-U-N-I-T-Y in letters a foot high for the man who is wide-awake enough to see it!

Learn Quickly

Let me make you a master electrician—the Coyne way. I've done it for thousands of others—farmers, laborers, factory men, and hundreds who haven't had more than 8th grade education! I can do it for you—and start you off on the road to independence and big earnings in just 90 days!

Not by Books

The secret of Coyne-training is that it is ALL PRACTICAL work. No books—no dry lessons—no useless theory. In the great shops of COYNE you learn the "ins and outs" of Electricity by actual work on *real* electrical equipment—the finest outlay in the country! And best of all—experts work right with you every step of the way, showing you all the electrical secrets that are essential to your success!

Big Pay Jobs

are common in electricity. Our free employment bureau puts you in touch with openings to choose from. The following are only a few of the kind of positions you fit yourself for in the Great Shops of Coyne:

Farm Lighting Experts $60 to $100 a Week
Armature Expert $50 to $100 a Week
Power House Operator $50 to $75 a Week
Auto Electrician $60 a Week and up
Inventor - Unlimited Income
Maintenance Engineer $60 a Week and up
Service Station Owner up to $200 a Week
Radio Expert, $60 a Week and up
Contractor, $3,500 to $15,000 a Year

Special Reduced Tuition Offer

NOW—For a short time I am making a Special 30th Anniversary Offer. You can now get a real money-making training at the lowest price.

No Advanced Education or Experience Needed

With a personal, *practical* method like this, is it any wonder I say I can make any man into a master electrician in 12 happy weeks? You don't need a bit of previous experience or advanced education. Many of our most successful graduates are fellows who never went to high school and hated "book learning." The Coyne method is *different!*

Special Offer Now

Make up your mind today to get into one of these real-pay electrical jobs. If you act *now*—I'll pay your railroad fare to Chicago and give you these courses free! AVIATION ELECTRICITY, RADIO and AUTOMOTIVE ELECTRICITY! And besides that, I help you to a part-time job while learning! FREE employment service for life after graduation, too. We place dozens of men in wonderful jobs every week.

Send for FREE Book

Just give me a chance to tell you about the unlimited opportunity that awaits you. Let me send you this big book free, containing over 150 photographs and listing and telling you how you can qualify for the kind of jobs that lead to $75 to $200 a week. If you really want more money and a wonderful future, send for this book now! No obligation. Simply mail the coupon.

Mail This **FREE BOOK** *Coupon To-day*

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H. C. LEWIS, Dept. 99-27
500 South Paulina Street, Chicago, Ill.

Dear Mr. Lewis:—I want the facts, so without obligation, send me your free illustrated catalog and details of your R. R. fare.

Name _____

Address _____

City _____ *State* _____

COYNE ELECTRICAL SCHOOL

500 S. Paulina St., Dept. 99-27 H. C. Lewis, Pres., Chicago

JULES VERNE'S TOMBSTONE AT AMIENS PORTRAYING HIS IMMORTALITY

AMAZING STORIES

December, 1929
Vol. 4, No. 9

In Our Next Issue:

BEYOND THE GREEN PRISM, by A. Hyatt Verrill. (A serial in 2 parts.) Part 1. Few stories have elicited warmer praise from our readers than "Into the Green Prism," and the author has nobly answered the call for a sequel in which, incidentally, all scientific "flaws" are taken care of —so the author says. As all good sequels should do, this one far excels the original story.

AIR LINES, by David H. Keller, M.D. It is to be expected by this time that Dr. Keller will inject an original twist and surprise element in a story that deals with any subject. Aviation is no exception to this rule. And yet the future that this well-known author predicts for air travel is not beyond the realm of possibility.

WHEN THE ATOMS FAILED, by J. W. Campbell, Jr. Although Mr. Campbell is a new author and an extremely young man as authors go, he gives us an interplanetary story of excellent merit, in which a goodly amount of interesting science is ingeniously interwoven to make a romance of startling plausibility. We predict a great following for this author in the field of literature and particularly scientific fiction.

THE SWORD AND THE ATOPEN, by Taylor H. Greenfield. The opening of this story will carry a strong appeal to victims of that most miserable of our minor troubles—hay fever. It is a tale dealing with the subject of chemistry—a subject which is rarely treated, probably because it requires more definite knowledge, which must be obtained by actual study, than do most subjects.

THE FOURTH DIMENSIONAL SPACE PENETRATOR, by Julian Kendig, Jr. Here is another unusual tale dealing with that most baffling of subjects—the fourth dimension. This time the author employs the planetary atom in a most interesting manner, for aid in building the yarn. We can assure you ten minutes of fascinating reading.

And several other stories, for which purpose we have added 16 more pages to the magazine.

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Our Cover

this month depicts a scene from the story entitled "A Baby on Neptune," by Clare Winger Harris and Miles J. Breuer, M.D., in which the monster of the sea on Neptune is about to destroy the son of Neptune's chief scientist. The earth men are shown in their space ship recording this happening on their film—which is later instrumental in helping them interfere with the monster's plans.

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FREE! MEN! Here's the dope you've been looking for

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J.E.S.

Many Earn $50 to $250 a Week in Work That is Almost Romance

If you're earning a penny less than $50 a week, clip coupon now for FREE BOOK! New 64-page book pictures and tells all about the Radio business, hundreds of opportunities—in work that is almost romance! YOU can learn quickly and easily at home through my tested, proved methods to take advantage of these great opportunities! Why go along at $25, $35, or $45 a week when you can pleasantly and in a short time learn how to hold the big-pay jobs?

I Give You 6 Big Outfits of Radio Parts

With them you can build 100 different circuits—learn the "how" and "why" of practically every type of Radio set made. This kind of training fits you to step into the good jobs—sends you out an experienced Radio expert. When you complete, my Employment Department will help you get a real big Radio job like Graduate Edward Stanko, now chief operator of Station WGR, or Frank M. Jones, 922 Guadalupe St., San Angelo, Texas, builder and operator of Station KGFI and manager of the best equipped Radio shop in the southwest, or help you start a Radio business of your own like Richard Butler, 1419 N. 17th St., Philadelphia, Pa., who made around $500 a month—compared with a small salaried, no future job as a motorman when he enrolled.

My Radio Training is the Famous "Course That Pays for Itself"

Spare time earnings are easy in Radio almost from the time you enroll. G. W. Page, 1807 21st Ave. S., Nashville, Tenn., made $935 in his spare time while taking this course. Al Johnson, 1409 Shelby St., Sandusky, Ohio, $1,000 in four months, and he didn't know the difference between a condenser and a transformer when he enrolled. I'll give you a legal contract, backed by N. R. I., pioneer and largest home-study Radio school in the world, to refund every penny of your money if you are not satisfied, upon completing, with the lessons and instructions received. Find out what Radio offers you—get the facts. Mail coupon—RIGHT NOW.

Clip Coupon for Free Book

Don't envy the other fellow who's pulling down the big cash! My proven home-study training methods make it possible for you, too, to get ready for better jobs, to earn enough money so you can enjoy the good things of life. One of the most valuable books ever written on Radio tells how—interesting facts about this great field, and how I can prepare you in your spare time at home, to step into a big-pay Radio job. GET THIS BOOK. SEND COUPON TODAY.

J. E. SMITH, Pres.
National Radio Institute
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R. T. I. R. T. I. QUALIFIES YOU TO MAKE MONEY AND ITS SERVICE KEEPS YOU UP-TO-THE-MINUTE ON THE NEWEST DEVELOPMENTS IN RADIO, TELEVISION, AND TALKING PICTURES **R. T. I.**

THE RIGHT TURN NOW BRINGS BIG-MONEY JOBS

and lifetime success in the newest and fastest growing industry in the world

RADIO

The great new infant Radio industry continually outgrows the supply of trained men for its needs. Therefore, R. T. I. is seeking hundreds of earnest, ambitious men to train to fill the jobs that lead to $2500—$3500—$5000 a year and up. Spare-time work too is waiting everywhere—thousands of dollars to be made easily, quickly, in every part of the country.

TELEVISION

Now comes Television out of the experimental radio laboratory on the verge of another vast demand for men who are qualified to expand it and the R. T. I. "3 in 1" Home Training in Radio, Television and Talking Pictures offers you big opportunity in this magic new field.

TALKING PICTURES

The vast sweep of Talking Pictures through the larger cities is about to cover the country, creating more and more jobs that must be filled by men with such training as R. T. I. gives

START AT HOME *Quick Money* NOW!

To meet the great demand for trained men from the new Radio, Television and Talking Picture field, R.T.I. with the help of its connections in the industry, has built up an easy, learn-at-home practical plan that will prepare you for these good jobs. You use fine testing and working outfits and learn by work sheets and the invaluable R. T. I. Job Tickets prepared by men who know. It's easy because clearly explained so you can do it—yet it is practical, scientific, and makes you an expert. R. T. I. starts you making money right at home and keeps stepping you up and up in the Big-Pay class.

The Facts Will Thrill You

You cannot possibly imagine the astounding present development of Radio, Television and Talking Pictures—their limitless future expansion—the big number of money-making jobs—spare-time profits—right now and rushing on bigger and bigger. The actual pictures and facts from all sources all are in the R. T. I. Free Book.

R. T. I. Famous "3 in 1" Home Training Radio—Television—Talking Pictures

Qualifies you easily, quickly, and surely for Big-Pay Jobs in RADIO or either of its new and fast-growing sister industries—TELEVISION and the TALKING PICTURES. Your age or previous experience do not matter.

NOW IS THE TIME!

Never before in the history of the civilized world has there been such opportunity for ambitious men. These great industries—the "Big 3"—offer Big-Money Jobs—money-making without limit—all available to men and boys who are far-seeing enough "to get in on the ground floor"—right now, —and R. T. I. makes it easy for you to get in. Send for the Big free R. T. I. book.

F. H. SCHNELL

Let F. H. Schnell and the R.T.I. Advisory Board Help You

Mr. Schnell, Chief of the R. T. I. Staff, is one of the ablest and best known radio men in America. He has twenty years of Radio experience. He was the first to establish two way amateur communication with Europe. Former Traffic Manager of American Radio Relay League. Lieutenant Commander of the U. S. Naval Reserve. Inventor and designer of Radio apparatus. Consultant Engineer to large Radio manufacturers.

Assisting him is the R. T. I. Advisory Board, composed of men prominent in the Radio industry—manufacturing, broadcasting, engineering and servicing. All these men know Radio and will help you succeed in their field.

R. T. I. R.T.I. TRAINS YOU AT HOME FOR A GOOD JOB OR A PROFITABLE PART TIME OR FULL TIME BUSINESS OF YOUR OWN

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Large radio factory has opening for several foremen thoroughly experienced on chassis assembly lines. Will make interesting proposition to right men.
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RADIO TESTERS
and balancers, experienced on A. C. sets; unusual pay for men who qualify. Call Smith, Grovehill 0600, or apply Silver-Marshall, Inc., 6401 W. 65th-st.

Salary Raised 331-3% Since Enrolling
Am now radio service manager for N. H. Knight Supply Co.—Earl P. Gordon, 618 E. 6th St., Oklahoma City, Okla.

Earned $500 Extra in Two Months
In spare-time work — I give you all the credit — J. Noffsinger, R. I. Box 37, Greenville, Ky.

$60 a Week—Now a $10 Raise
Repaired sets others fell down on—promoted to foreman — Fred E. Klemann, Box 3, Lisle, Ill.

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City.....State.....

VOLUME 4

AMAZING STORIES

THE MAGAZINE OF SCIENTIFICTION

DECEMBER, 1929 No. 9

T. O'CONOR SLOANE, Ph.D., *Editor*
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Editorial and General Offices: 381 Fourth Avenue, New York, N. Y.

Extravagant Fiction Today - - - - - - - - - - Cold Fact Tomorrow

The Subdivision of Power

By T. O'Conor Sloane, Ph.D.

IN reading the old-time journals, as they may now be called, which appeared in the end of the last century, popular or exclusively scientific, it will be found that one of the great problems of engineers was the transmission of power in small units. The reason that this was so desirable was largely because power plants, using engines or waterpower for generating power, were built on the large scale; the small ones were uneconomical and required so much personal attention that they were not used except to a very limited extent.

In those days the oil refineries were devoted to the production of kerosene oil largely and the heavier products. The naphtha, so-called, which we now call gasoline, was almost a nuisance. When water gas came into vogue, it had to be enriched, because pure water gas gives a blue non-luminous flame. And for its enriching this naphtha (present day gasoline), was found to be quite available, and the gas companies used to pay about 3c a gallon for it.

It is said that at one time the refineries used to run it away as a waste product. Now, of course, there is an enormously large demand for it, for automobiles principally, and the refineries are devoting all their energies to producing a large percentage of it from the natural petroleum, and in the regions of the oil and gas wells the effort is made to condense it out of the natural gas.

Now there were formerly two ways in general of distributing power. One was to have a large power plant or a very large engine generating power enough for quite a district. And from its flywheel sometimes or more usually rope or belt driving pulleys, lines were run to one place or another to drive individual machines. The use of compressed air to be distributed from the central plants, the use of water in a similar way, all these things were taken up, and the rope transfer of energy was carried out rather successfully by using a small rope running at a very high velocity.

From a mechanical standpoint we are now in a new era and it is fair to say, keeping in mind what has just been told, that the characteristic of the present age is the universal use of power engines of very small sizes. This avoids the necessity for the transfer of anything. Each little unit is a plant in itself. The gasoline engine leads to small, self-contained units. Each automobile contains a complete power plant and electric generator. Here there is no transfer of power; everything is self-contained. The same applies to small boats, for the inboard, as well as the outboard motor, has obtained an enormous success and excited much interest as a proposition for racing, as well as for pleasure or commercial purposes, often as an auxiliary on sailing vessels. The old-time lobster fisherman of Maine used to go out in his dory and row standing and facing the bow in search of his lobster buoys. The present lobsterman has his power boat, in which a small engine drives the screw, and propels the boat, and is also arranged to operate a sort of little capstan to haul up his lobster pots to save him that amount of labor.

The gasoline engine is what is known as an internal combustion engine. Instead of having a fire under a boiler or anything of that order, the fuel is introduced directly into the cylinder back of the piston, mixed with air, and is then burned. This is extremely economical. It is really much more so than the external combustion steam engine, but its economy would be greatly increased except for the unfortunate fact that the temperature of the cylinder walls has to be kept down in order to enable them and the piston and piston rings to be properly lubricated and to protect the metal from early burning and "seizing," as the English say—that is to say, sticking and bringing the engine to a standstill.

Thus the gasoline engine, the successor to the gas engine, has made it possible to produce power in small units with high economy, and in doing this it has fairly revolutionized the world. The horse is rarely seen upon our streets, still more rarely upon the country roads, and returns of railroads are being affected by the gas engine in buses and autocars. The trolley car is being displaced by motor buses, and all this is due to the fact that power can now be economically generated in small units. And now we come to electricity. Here the units are, practically speaking, individual, although they derive their power from a central station. In the house, by the use of small power units, ice is made in the refrigerator, the sewing machine is driven individually, the flat iron is heated, the small range is operated, toast and waffles are made upon the breakfast table, and many operations are carried out on a very small scale, as regards the power expended on each, due to the adaptability or "elasticity," as we may term it, of electricity.

If we went back, say 30 years before the present enormous developments of the small power unit, we would find the world a much different place from what it is now, a place in many ways less pleasant to live in, a place where the individual would have to work much harder than he has to work now, and where countless conveniences, which are getting to be essential to our living, would be wiped out of existence. And the interesting part of it is that we are just at the beginning of an advance. We are now using gasoline for fuel; this is dangerous, especially in connection with the almost universal practice of cigarette smoking, because of the high inflammability of this fluid. But if a successful motor could be constructed to operate with kerosene, or better with a heavier oil, as on the Diesel principle, and of small power and light weight, an enormous improvement would be effected and we would no longer fear of burning airplanes and automobiles. If we dip a burning match into kerosene oil it will be extinguished as if it were thrust into water, but do the same with gasoline and you will inevitably ignite it and may have a bad fire. We have got the small electric unit for the sewing machine and for all sorts of domestic appliances; we have got the small gasoline motor for use on airplanes and on automobiles and elsewhere. Now, what we want and what is going to come, is the internal combustion motor, which will use a fuel that is so safe that the danger of fires from gasoline will be completely abolished. The Diesel driven automobile and airplane will solve one of the world's greatest problems, because any engine which could be used on an automobile will be applicable to a vast number of purposes, and an engine burning heavy oil is absolutely safe.

The monstrous thing dropped swiftly, like a descending parachute, towards me

VAMPIRES *of the* DESERT

Illustrated by WESSO

By A. Hyatt Verrill

Author of: "Into the Green Prism," "Death from the Skies," etc.

¶ After a rainfall, a good part of the arid deserts of Chile, Peru and Bolivia are covered with abundant vegetation. Only recently there was a temporary change in the climate of Peru. This involved a great deal of rain, which definitely threatened the guano industry of the celebrated bird islands off the coast. Suppose another change occurred in the ocean currents to give even greater rainfall in these regions. Is it beyond the realm of possibility to say that the almost fossil seeds of prehistoric plants might come to life again? At any rate, it is a clever idea, ingeniously built up into a scientifiction story of Verrill's highest order.

WHEN I sailed for Peru, to accept a position as field paleontologist for the International Petroleum Company at their oil fields near Talara, I little dreamed what amazing experiences and astounding adventures were in store for me.

The life of a paleontologist is not, as a rule, an exciting or adventurous one. In fact, there is scarcely a branch of scientific field work that promises so little in the way of adventure, peril or thrills. Fossils, interesting as they may be to the trained scientist who studies them, are not what one might call dangerous game. Neither are they elusive, shy nor suspicious of human beings. And, aside from the ordinary and to-be-expected hardships of camp life and field work, hunting fossils is perhaps the safest and tamest of professions. And as I was to hunt and study the smallest and most abundant of fossils—namely, diatoms and foraminifera—for the presence of certain species of these minute fossil animals is known to have a very direct bearing upon petroleum deposits, and as my hunting ground was in the open desert where there were neither wild animals nor wild men, and as my entire field of activities was within sight and sound of the busy oil refineries, the wells, the pump-houses and the well ordered "camp" or town, the possibility of any excitement, any danger or anything unusual never occurred to me. And had anyone suggested such eventualities, I most assuredly would have laughed them to scorn. Yet, so strange is fate and so whimsical her moods, and so little do we know of the future that, within a few months after my arrival at Talara, I was to have some of the most astounding, even incredible experiences that ever came into the life of any man. Indeed, were it not that the facts are well known, and that meagre reports of the remarkable occurrences have already been published in the press, I should hesitate to write of them for fear of being classed as a romancer and as writing fiction in the guise of fact. But I feel that, as precisely the same things may—in fact, probably will—recur again somewhere—even if not in Peru—and as many human lives, perhaps entire communities, may be destroyed by such recurrences, the public should be acquainted with all the facts and details of the visitation, and thus should be prepared for its repetition.

But before beginning my story, I wish to disclaim the undue credit that has been accorded me for solving the baffling mystery of those terrible times and for saving the lives of hundreds — probably thousands—of my fellow men and fellow women. Any man with scientific training, a knowledge of zoology and with an interest in the unusual forms of animal and plant life could have done more than I did. It merely chanced that I was on the spot, that my scientific interests had been aroused before the happenings occurred and that I had always taken a deep interest in the botany of the tropics. Never before had this fad been of any real value to me or to anyone else. In the first place I never had visited the tropics and in the second place I made paleontology my life work and confined my studies to invertebrate paleontology at that. Yet I cannot help feeling that my amateurish interest in plant life must have been inspired by the Divinity and for the sole purpose which it later and so fortunately fulfilled.

One thing more I must mention, for it had a very great bearing upon the affair and enabled me to make deductions and to understand matters that otherwise would have been impossible to understand. During my post-graduate course at Yale I was greatly interested in the deep-sea researches of the United States Fish Commission under the direction of Professor Verrill, who was my instructor.

Largely, this was due to the fact that—as is well known—the ocean's beds are composed mainly of foraminiferous ooze, the accumulated billions of skeletal remains of foraminifera, and that many living species—closely akin to the fossil form—are obtained from great depths. But I soon found, when on the "Albatross" in company with the Professor and his assistants, that one branch of science—or more especially one branch of any one department of science—hinges upon another. Thus to study diatoms intelligently, I was compelled to make a fairly intensive study of other and higher forms of marine life. Such, for example, were the ascidians, or sea cucumbers; the corals and sea-anemones, the sponges, and such forms of life as the hydroids and bryozoans as well as jelly-fish. And had I not thus acquired a fairly comprehensive and accurate knowledge of the life histories and habits of these harmless and interesting marine creatures, I never would have been able to make head or tail of the affair during that nightmarish time at Talara.

Talara, as I have hinted, is situated on that barren, treeless, waterless strip of South America's coastal desert that stretches from the vicinity of Guayaquil in Peru southward to central Chile. It is not, however, a flat or level desert. Rather it consists of desert sandhills rising to rocky hills, equally bare and sterile, and forming an incorporate part of the desert, and which become higher and more numerous as they approach the Andes, into which they merge. In fact, the sand of the desert proper is nothing more or less than the accumulated detritus of these hills, decomposed and washed down through countless ages. Originally—or at least at some remote period—the entire area was beneath the sea. Hence the presence of fossils of marine organisms. And it was to study these remains, which millions of years ago were beneath the waters of the Pacific, that I was employed by the International Petroleum Company; for, strange as it may appear, some of the largest of the world's known oil deposits are in this desert country of Peru.

FOR countless centuries this desert has been rainless; in fact, it is a desert merely because of lack of rainfall, and as the sand is impregnated with nitrates, phosphates and potash, it is fertile and capable of producing large crops of agricultural products when watered or irrigated. Possibly my readers may think that this somewhat lengthy dissertation upon the Peruvian desert is quite unnecessary to my story, but let me assure them that it is most essential, and I request that those who may read this story of the incredible occurrences at Talara will read this portion very carefully. Otherwise it will be practically impossible to secure an intelligent idea of the happenings and their causes and to realize that they were neither miraculous, supernatural nor at all beyond the realms of cause and effect in nature.

Also, I must try the patience of my readers still further by briefly sketching the causes for the rainless, desert condition of this coast. The Humboldt Current, flowing northward from the Antarctic, tempers the normal temperatures of the tropical coasts of the equatorial and subequatorial regions of the west coast of South America and at the same time acts as a condenser for moisture-laden atmosphere that otherwise would reach the coast. Added to this is the fact that the warm, moisture-filled air from the vast Amazonian jungles is condensed by the cold Andean heights, and its moisture is thus deposited as rain or snow before it passes westward over the Andes.

At Talara, however, the Humboldt Current does not actually wash the coastline. A small, warm water current, known as the *Niño* or child, flows southward from the Bay of Panama and forces its way between the Humboldt Current and the shore. And the relative size and volume of these two currents vary considerably according to the force and direction of the prevailing winds and because of other causes—very possible seismic disturbances of the sea bed. From the earliest times, as proved by my studies of fossils and by the observations of more eminent scientists, these currents have varied. Often the variation is slight and temporary, but at other times it has been of long duration and very marked. Even a slight variation in either current has a decided effect upon the climate of the Peruvian coastal land. The temperature alters materially, mist and even light rains fall, and with miraculous suddenness vegetation springs up from the bare desert and barren hillsides. Usually the change continues for only a few days or weeks, but in the past ages such changes of currents, climate and the resultant vegetable and animal life obviously—as proved by fossil remains—endured for many years.

In fact, one of the first and most interesting discoveries I made was that the desert soil—to a depth of twenty-five feet or more—was in many spots composed of alternate layers or strata of sand, some clear and some containing a large percentage of plant seeds. It was thus evident that alternating periods of dryness and dampness had occurred from the most remote times, and while the proportionate number of strata and their relative depths varied somewhat, there was abundant evidence to show that from the most ancient times there had existed regularly defined and periodic eras of rainfall and lack of rainfall, with the accompanying abundance of vegetation and lack of vegetation. The lower layers of seeds were fossil, but the upper ones were comparatively recent and with so slight a layer of sand superimposed upon them that a heavy rain would unquestionably enable them to germinate and sprout. That this was the case, was in fact proved when in 1924-5, after a comparatively short period of rainy weather, the hills and deserts about Talara—and as far south as Antofogasta, Chile, became covered with a rank semi-jungle as high as a man's waist. Moreover, nearly all of the plants that then appeared were strange to the inhabitants and totally distinct from any found elsewhere in South America. And in examining the seeds which I discovered, I found that—with few exceptions—they were of species, genera and even families entirely new to me.

It was this discovery that again aroused my long-dormant interest in tropical plant life and I was about to try my hand at growing some of the more unusual seeds, when Nature saved me the trouble. A severe earthquake shook the entire west coast of South America, causing a vast amount of damage in southern Chile, raising Juan Fernandez Island several hundred feet above its former level and upraising the sea bed between that island and the coastline for at least two hundred feet. As a result, the greater portion of the Humboldt Current was deflected to the west into the Pacific, the warm Niño current increased in size and volume, and heavy rains at once commenced to fall along the coasts of Peru and Chile. Irreparable damage was caused in many localities. Estates, fields, villages and even large towns were swept away by floods that came pouring down the ancient dry river beds from the mountains. Buildings of sun-dried

adobe, well adapted to the formerly rainless climate, melted and were reduced to mud, and in a few weeks such cities as Piura, Trujillo and others were utterly obliterated.

In Chile the nitrate beds were completely destroyed, many large and prosperous communities were rendered uninhabitable, and even Lima, Peru's capital—being built largely of adobe—suffered losses totaling millions of dollars. Fortunately the capital's more modern buildings and residences were of concrete and remained unaffected, and for similar reasons Talara suffered little. The native shacks and the old churches and government edifices crumbled and vanished, but the majority of the buildings at the port, as well as the mining camps of Negritos and Lobitos, being of wood, concrete or corrugated iron construction, suffered none at all. Neither did the torrential rains cause any appreciable damage to the petroleum industry.

The sand, being washed away, allowed some of the derricks to topple and fall, many pipe-lines were broken and similar small damages resulted, but on the whole the rains appeared more of a blessing than a curse in the district. The climate, although warmer, was less oppressive; the bare desert and hills became almost instantly covered with tender green, and hollows that became filled with water were the resort of flocks of wild geese and ducks that afforded great sport for the employes of the company.

FINDING that my paleontological work was seriously—though I hoped only temporarily—interrupted by the rain and the disruption of some of my favorite localities for study, I had an abundance of spare time which I devoted to examining with the greatest interest the plants that had sprung up from the seeds I had discovered. Also, being a keen sportsman, I spent considerable time hunting, both about the pools I have mentioned and in the embryonic jungle that—within two weeks—had become waist-high and almost impenetrably dense. To my surprise and delight I discovered that with very few exceptions the growth was composed of plants which hitherto had been known only in a fossil state. There were many forms of tree-ferns, of the horse-tails, of giant lycopodiums and of odd aberrant leguminous plants that—as nearly as I could judge—were the ancestors of our common beans, peas, etc. At first I was greatly amazed to find these supposedly-extinct and fossil forms thus growing in abundance, but a short investigation and a little logical reasoning soon convinced me that it was a perfectly normal and easily explicable condition. From the most remote geological times the country had been periodically wet and dry as I have said. Hence plants that for a few years or centuries grew in the district, would have had no time to alter or evolve to higher forms before a rainless period occurred. Thus the earliest types of plant life that had existed in the district had been perpetuated with no great changes from the far-distant geological periods.

Probably on no other spot on earth could such a condition have occurred, and I decided to take advantage of the unique opportunity to write a monograph on the subject, to describe the habits and appearances of the plants, and to secure accurate photographs as well as to preserve specimens for the benefit of science.

It was while doing this that I came upon a small group of most peculiar shrubs. I say shrubs, though they were not shrubs in the true sense of the word. They were rather more like attenuated and branched tubers, like gigantic, slender and distorted sweet-potatoes growing above ground. The stalks were fleshy but fibrous and very tough. There were no leaves, and the growth, as well as the branching habit, was by means of joints or articulations, one tough olive-colored section budding from another and increasing in size and length until it, too, developed additional joints. When I first found the things, they were quite small—the largest barely a foot in height—but they grew with truly amazing rapidity. In a few days they were as high as my waist and all my interests became centered upon them. I found no others, although every natural surrounding and condition seemed identical with other localities, but, I reasoned, this was not surprising, as the same conditions that had led to the perpetuation of long-extinct species would at the same time have acted to localize each form.

The more I examined the odd growths, the more they puzzled me. In many respects they could not be classified among any of the various botanical genera, families or orders. I prepared sections and examined them under the microscope. I tried all means of identification—but in vain. Oddly enough, they bore many resemblances to the algæ or marine plants, and especially to those natural-history puzzles, the bryozoans and hydroids which seem to form connecting links between the animal and vegetable kingdoms. But who ever heard of a bryozoan or a hydroid growing on land? Still, I reasoned, in the remote periods of the earth's existence there may have been such, for there are land algæ as there are also marine arachnids or spiders. Why not land bryozoans and hydroids?

It was a fascinating thought, but until my strange growths saw fit to flower or seed I could not determine what they were. Hence my elation can be judged—at least by any scientist—when I discovered signs of the plants budding as if about to flower. At this time they were six feet or so in height with main stems as thick as a man's body and most remarkable appearing things. The buds—if buds they were—broke through the outer bark or skin at the terminal joints of the branches, and at the same time I noticed a distinct swelling or enlargement of these joints.

I can best compare the effect to the flowering of cacti. As the buds increased in size—with remarkable rapidity—they gave promise of being even more interesting and stranger than the plants themselves, and also of developing into blooms of great beauty.

There were indications of long delicate petals of brilliant colors, and it was obvious that the flowers would be of truly gigantic size. But my expectations had fallen far short of the reality, when, on visiting the spot one morning, I found one of the buds had partly opened. I had never seen anything like it or even resembling it. It was not by any means fully developed, and I judged from its appearance that it was a night-blooming plant, and that in order to see the flower in its full glory I would be obliged to visit the spot after dark. However, it was sufficiently open for me to obtain a good idea of its character, and I examined it with the most intense interest. It appeared semi-transparent, was very fleshy, or I might even say gelatinous, and was coated with a shining, moist, and apparently sticky substance. At the stem or base, for there was no true stem, it was a dark intense purple and bulbous in form. Beyond this purple area was a border or fringe of pure white membranous

growth, and beyond this were the innumerable long and multicolored petals—or so I judged them—that were folded or coiled together like the partly opened petals of a gigantic chrysanthemum flower.

In size the strange bloom was nearly four feet in length by three feet in diameter. It had no appreciable odor, and though I was greatly tempted to do so, I forebore touching it for fear of injuring it and preventing it from expanding to its full perfection. Yet, strange as it may seem, there was something about it, despite its beauty of form, its colors and its translucent gelatinous appearance, that was repellant. It was no doubt on account of its bizarre appearance, for I have noted that the human mind naturally recoils from or at least is suspicious of any unusual or strange form of some well-known natural object. Even human freaks have this effect upon the majority of persons, and the flower and the weird growth that bore it were sufficiently unusual and strange to create a vague dislike and even distrust in even my scientific mind.

However, I determined to visit the things after nightfall, and turned my attention to hunting. I returned to my quarters in time for breakfast with a fine bag of ducks and snipe. The rains had now ceased for several days, but the newly formed streams still flowed across the former deserts, and there was sufficient moisture in the soaked earth to keep vegetation going for some time. I mention this, because the cessation of the rains had a very direct bearing upon subsequent events.

It was while I was eating my breakfast that I had a phone call from Lobitos asking me to come over as soon as possible as a new field was being prospected and they wished me to make microscopic examinations of the samples from the test-holes. I was rather disappointed at thus being summoned away, when I had counted upon witnessing the full development of my strange plants, but I comforted myself with the thought that there would be many more flowers, and that I should not be long absent. So, packing my field outfit, I ordered the car and started for Lobitos. The work, I found, would take me much longer than I had expected, and I wondered if I would be able to return before all the remarkable flowers had blossomed and faded. Little did I dream how soon or in what a remarkable manner I should again meet with those puzzling, amazing productions of the unusual plants I had found.

IT was on the second day of my stay at Lobitos that news of the murders at Negritos reached us. Two Indian or rather Cholo laborers had been found dead in front of their barracks. Apparently they had been garroted or strangled to death, but there was no clue to the murderer and no known incentive for the crime. Both men had been—as for that matter were all the Peruvian Cholos—quiet, peaceful, hard-working and very inoffensive fellows. Their companions declared that neither had been in a brawl, a discussion, or an argument during the preceding evening or night; no one had heard loud or angry words, and as both bodies still had their week's wages upon them, robbery was discarded as a possible motive for the crime.

But Negritos was terribly stirred up over the tragedy. For years the place had been a model of law and order. There had not been a murder, a robbery, a burglary nor any serious offense committed for fully ten years and the only arrests had been for drunkenness, gambling or petty thefts among the natives and for trespass. And as Negritos and Lobitos were "dry" camps, even drunkenness was very rare. Hence two murders, occurring on one night, and without any known reason, created a great sensation. Moreover, there seemed little doubt that the crimes were committed by some stranger.

The Peruvian Indian or Cholo is not a particularly brave or desperate character. He abhors bloodshed or violence in any form, and neither I nor any of the officials could imagine a docile Cholo deliberately attacking and successfully strangling two men. And why, it was asked, had there been no outcry? It seemed inconceivable that the two men could have been killed so quickly that they could not have cried out. And why did the second victim remain quietly waiting, while his companion was being killed? In fact, the more we discussed it, the more mysterious it became.

"In my opinion," declared Sturgis, the chief engineer, who had had a tremendous amount of experience with the natives, "it's the work of a Chilean or a Colombian. Likely as not those two Cholos had worked somewhere where there'd been Chilenos or Colombians, and had got into some sort of trouble with them—maybe won too much at gambling, or it might have been over a woman. Then this bird drops in here, recognizes the fellows, and evens scores. The only thing that bothers me is why they weren't knifed—that's the Chileno method as a rule—and why they weren't robbed—no such a criminal ever lets a chance of pocketing a few dollars get by him.

"Hmm, in all probability the murderer didn't have time," suggested Henshaw. "He may have been scared off. But how the devil could one man strangle two others?"

"Maybe they weren't strangled," I put in. "I'll bet no one has made an examination to learn if they weren't knocked over the heads first. You see knifing a man isn't always a safe and quiet method of putting him out of the way—he's liable to yell. And it would have been as hard for a man to knife two Cholos without their giving a cry as it would have been to strangle two of them. In my opinion they were knocked senseless and then garroted. And doesn't it seem more like the work of an East Indian or an Oriental than a South American? Aren't there some coolies—Hindus—working up at Porvenir on the railway? And how about those Chinese and Japs at Talara? I'll bet it was one of those fellows."

"Maybe you're right," agreed Sturgis. "I hadn't thought of the Hindus or Chinese. But anyhow, Stevens will round 'em up whoever 'twas; he was chief of police in Manila and he's no slouch, even if this camp has got so darned law-abiding that he's grown fat and lazy."

At this moment the telephone rang, and Henshaw, who answered, turned to me. "You're wanted at Negritos, Barry," he said. "Stevens wants you to help him on this murder case. Says he needs a microscopist and asks if you're not a doctor of sorts—Doctor Samuels is off on leave, and that interne Rogers refuses to conduct a post-mortem unless he has a competent man—biologist or M.D. or anatomist or some kind of an 'ist'—along with him."

I was surprised, of course. But after all it was not surprising. I was the only microscopist available, and I had at one time taken a course in anatomy with the idea of becoming a surgeon. But I was not sorry to leave Lobitos. It was an unpleasant spot at best, and I was wishing I might have a chance to examine my remarkable flowers. Still I could not leave at once, I had to complete my work at Lobitos, for that, after all, was my real

job, and taking the 'phone I told Stevens I would go over to Negritos the next morning early. He swore and raved a bit—he was a testy old chap—but I pointed out that I was employed to conduct paleontological studies and not police-court investigations, and that I was answerable only to the New York office. In fact, I grew a bit peeved myself and added as a clincher that I was coming only to oblige him and out of curiosity, and that unless I were requested politely and not ordered, I wouldn't go at all. This quieted him. He apologized, begged me to hurry, and rang off.

Poor old Major Stevens! I was fated never to hear his voice again, never to see his ruddy face grow apopletically purple as he sputtered, fumed and swore. And I and all the others were fated to have the shock of our lives before another twenty-four hours had passed.

I was aroused from a deep sleep by the furious ringing of the 'phone, and lifting the receiver heard an agitated, excited voice. "For God's sake, get back here!" it cried. "This is Merivale speaking. It's terrible—three more men murdered here last night—two women killed at Talara and—when we went to call Major Stevens we found him dead—strangled like the others. We need every white man we can get—there's a fiend incarnate here somewhere. We must find him and stop this thing. And, Barry, bring Henshaw with you."

I was aghast. What did it mean? Seven, no, eight murders within two days—and Major Stevens among them. It seemed incredible. What was the motive? Who was the murderer? How could he have committed the crimes without detection, when, as I felt sure, the camps had been patrolled and policed after those first two deaths? Of course, the motive for killing Major Stevens was plain. The murderer feared him and took this means of getting him out of the way. But the others—the Cholos. Only on the theory of a homicidal maniac could I explain it. Henshaw and Sturgis were as shocked and horrified as I was, and both agreed that some crazed native must be at the bottom of the killings, unless, as Sturgis suggested, some Oriental had run amuck. But when we reached Negritos in record time, and learned more of the details of the crime, we were at an utter loss.

MERIVALE was in charge, and though he was a competent enough young chap, and an excellent executive, he was so flabbergasted and upset over the Major's death that he didn't know which way to turn. In fact, he could scarcely give an intelligible account of the events that had occurred, and I found McGovern, the boss driller, far more lucid. He had been a little of everything in his day and at one time had been a New York policeman with a beat in one of the toughest sections of Manhattan's lower East Side.

Major Stevens, knowing of his police record, and cognizant of McGovern's ability to handle men, had sworn him in as a deputy, and had placed him in charge of policing the camp. He was a huge, burly fellow; red-haired, freckle-faced, and was personally acquainted with every man, woman and child in the district. He had known the two Cholos killed on the first night, and he assured me, as he said he had assured the Major, that both were the most industrious and law-abiding of natives.

"Sure, Pablo an' Gonzalez was hard-working, dacint lads," he declared. "Didn't I have thim worrkin' over to thoity-two week afore last. Niver the gamblin' nor drinkin' sort, sor, an' peaceful as lambs. Now who the divvil, I'm askin' ye, would have raison for bumpin' of thim two lads off? An' they wasn't robbed, neither. No, sor, 'tis not robbery nor a row nor nothin' of that kind that caused it. 'Twas some extr'o'd'nary motive, as ye might say, an' ye'll have to find the motive afore ye find the murderer, if ye ask me. Who do I think it might be? B'gorra, how should I know? And then these others last night. Yes, sor, the camp was lit bright as day and the gang of us patrollin' the place. Sure, there was fourteen on us all gumshoin' about, an' meself wit' three boys on duty fernist the Cholos' quarters. An' niver a sound of a foight nor a cry nor nothin'. Thin with the comin' av day-loight come a scream from Block Wan, an' another yell from Block Foive, an' wimmen a-runnin' an' me an' the boys beatin' it to find what the trouble was an' all, an' there they be—the three of thim, deader'n busted drills, an' never a mark onto 'em savin' of the red marks about their necks. B'gorra, no, I'm mistook. Wan of thim had marks on his chest an' another on his face like they'd been shot wit' rock salt, if ye know what I mean. An' then off I goes to tell the Major—God rest his soul—and to find him dead by the same token. 'Tis downright unnat'ral, sor. Damned uncanny. An' I don't mind admittin' it's got me goat, sor."

"What about the women killed at Talara?" I asked.

But McGovern had no definite information about them. They had, so it was reported, been found dead, obviously killed, on the desert just outside the town, and as they had been alive and well at a late hour the preceding evening, and had started for their homes on the hillside beyond the cemetery, about eleven, it was certain they had been murdered sometime between that hour and daybreak.

"I'll be damned if I see how a man could kill three Cholos and the Major up here and two women at Talara at the same time," cried Henshaw. "McGovern and his men didn't see a soul on the street or on the road, there was no car out and it's a sure bet the murderer didn't travel by airplane. And everyone swears those three men in Blocks One and Five were not dead at midnight. And there's the Major—he was all right at two o'clock this morning."

"I don't consider that part of the affair as remarkable as the other facts," I told him. "A man could walk to Talara in a couple of hours. But why should the fiend kill five men here and two women there? How did he manage it without being seen or heard by McGovern or his men, and why didn't any one of the five—or rather, eight—cry out? And how did he kill them? I tell you, Henshaw, there's something deep in this that we haven't thought of yet. In my opinion the murdered people have been killed by some means we haven't suspected—that strangling is just a bluff—it's some terrible poison or something of that sort—perhaps administered hours before the men die."

"How about that knocking them on the head theory of yours?" asked Henshaw.

"That might be it if it was not for the Major," I said. "I can't imagine anyone sneaking up on him."

"It would have been easy enough," declared Henshaw. "He was sitting close to his open door and very likely fell asleep. If I were in your place I'd get on with the post-mortems and see if you can find any signs of any injuries or of poisons. But I don't envy you your job."

"It's not mine," I informed him, "and if you don't

look out, I'll call you in to help. We've all got to get into this. I'm going to do all I can and Merivale wants me to take charge as senior here. I wish to Heaven old Doctor Daniels were here. Young Rogers is a good doctor—good enough for his routine or hospital work, but he's never made a post-mortem in his life and I know very little about such things. However, I suppose Rogers can find out if there are injuries and if there was poison given. I'm merely going to be present and make microscopic examinations of the stomach contents and blood."

But the results of the post-mortems left us as much in the dark as ever—in fact more puzzled than ever. The Cholos all seemed to have been victims of pernicious anæmia, or to have bled to death, although there were no wounds that would have accounted for any considerable loss of blood. The marks upon their faces and chests that McGovern had mentioned were punctures, but seemed barely to penetrate the skin, and there were no blood stains of any considerable extent upon the men's garments. In two cases there were severe contusions on the heads, but these might have been caused by falling upon the stones. The third man, however, had a small puncture in his jugular vein, and the left eye was injured and appeared as though the eyeball had been pierced and the liquid had run out. Yet there was no blood upon the fellow's clothes. We did not make a post-mortem upon the Major, but externally there were no marks upon his body that seemed adequate to have caused death, aside from the red line about the throat that was present on all the bodies. And, unlike the Cholos, he appeared to have lost little, if any, blood. We got into telephonic communication with the resident doctor at Talara who reported that the dead women bore no marks of violence aside from numerous small punctures on the breasts and back, which marks he compared to the marks that might have been caused by bird-shot fired from a distance, yet there were no shot in the wounds. Neither did my microscopic examination of the stomach contents, the tissues or the blood reveal the presence of recognizable poison, and Rogers' chemical tests showed no toxic reactions.

Of course all this took time, and it was late in the afternoon when the disagreeable work had been completed. All ordinary work had come to a complete standstill. No one could put his mind on work; the executives and bosses were all too much engrossed with the succession of mysterious tragedies to carry on, and the Cholos had a glorious loaf, apparently quite unmoved and undisturbed by the uncanny fate of their friends and companions. And naturally the camps were in a tremendous state of excitement and nervous tension. The women were frightened almost out of their wits, no children were allowed out of doors, and even in broad daylight everybody acted as if they expected to be struck down by some invisible hand at any moment.

The men too seemed to be filled with superstitious dread. The mere fact that men were murdered—even had there been three times as many—would not have troubled the hard-boiled rough-necks who made up the working force of white men. Most of them had led wild lives. They had been in many a mining camp where human life was held cheap and murders were everyday matters, and the majority of them had been in the World War. A score of men—either natives or white—killed in a riot, a strike, a quarrel or a drunken brawl would not have caused them a moment's thought. But the mysterious manner of the eight deaths, the inexplicable reason for the murders, and the fact that there seemed no clues to the murderer filled these tough, case-hardened old-timers with the fear of the supernatural. Indeed, more than one openly expressed his opinion that the men had not been killed by anything human, that some old Incan devil or evil spirit had had a hand in the tragedies, and that the only safe course was for everyone to clear out and stay out.

Of course, the intelligent population scoffed at such ideas. We knew well enough that murders had been committed, and we felt confident that whoever had so far eluded us would be captured if he attempted to repeat his crimes. And we arranged such a complete cordon of guards, sentries and police about the camp—that we felt positive that if the murdered put in an appearance that night he would never escape us.

LOOKING back upon it now, I can realize how really silly and amateurish our plans were. On the previous evening the murderer had committed his fiendish crimes despite the brilliant illumination of electric lights and the presence of a large force of men, and had escaped unseen. And yet we thought that by darkening the streets, by hiding in the shadows, and by giving orders that no inhabitant was to be on the streets after eleven, that we could apprehend a murderer who had shown such devilish ingenuity in eluding everyone hitherto.

It was a dark, starless night, and only enough lights had been left burning to enable us to see moving figures, should they appear upon the streets.

Fully fifty men were on duty in the camp, and I had also posted a dozen men outside the limits of the camp where they could watch the surrounding desert. These men were carefully hidden, some in the dense shadows of the oil-derricks, others behind piles of pipe, and still others back of rocks or other objects. It seemed to us at the time that it would be utterly impossible for any living creature to approach the camp undetected or to make a way through the streets unseen by the armed watchers. Of course there was the chance that the maniac or fiend or whoever he was would not appear, that he had satiated his lust for killing, or that, knowing we were awaiting him, he would keep away until the excitement and watchfulness had died down, or perhaps forever. But we reasoned that he must be a maniac or a drug-fiend and that in such case he would continue his attacks and, moreover, would not reason that he was courting disaster by reappearing.

Nothing had occurred up to midnight. I had gone the rounds several times, all the men reported on duty, thoroughly wide awake, and not a sign of anyone other than the patrols had been seen. One o'clock, two o'clock passed, and then suddenly—echoing horribly through the darkness—came a frenzied scream of deadly terror. Instantly, with chills running up and down my back, I dashed in the direction of the cry, and I heard the racing footsteps of half a dozen of my men behind me. But we had not gone fifty yards before we were met by a flying figure rushing madly towards us from the desert. It was McGovern, and never have I seen mad terror and fear so depicted as upon the big Irishman's face. His eyes rolled, his mouth twisted and slobbered, his teeth chattered and his bulky muscular frame shook and trembled like that of a frightened child. He was almost bereft of his senses. He actually clung to me, and he babbled and mumbled incoherently. With the utmost difficulty we

finally got him to talk intelligibly. And the tale he told was incredible.

He had been sitting, he declared—interlarding his story with many ejaculations and frequently crossing himself—upon a pile of lumber in the shadow of a newly-erected derrick about one hundred feet beyond the barracks known as Block Seven. He insisted he had been wide awake, that he had felt no fear, and that he had continually turned and peered in all directions. No human being, he declared positively, could have approached him unseen, and yet, suddenly and without sound or warning, something soft, cool and damp had been thrown over his head, almost smothering him; a muscular arm had encircled his neck, fingers had gripped his throat, and he had felt blinded, choked, strangling. Terrified almost to madness, using all his tremendous strength, he had struggled, fought, tried to tear the throttling arm loose, to throw off the smothering thing that had dropped—like a wet blanket as he described it—over his head. For a time it had seemed as if his struggles had no effect. He turned, twisted, tried to reach his adversary's body, but in vain. Then, whether by accident or design he was not certain, he had flung himself down, had rolled in a pool of thick crude oil, and instantly the strangling hand released its grip, the covering over his head had been jerked away, and leaping up, screaming at the top of his lungs, McGovern had turned and raced towards the camp.

Scarcely waiting to hear the end of his amazing tale we dashed forward to the spot where the Irishman had been attacked. But there was no sign of a living thing in the vicinity. In fact, we would have doubted the Irishman's story, would have thought he had dozed off and had dreamed the whole thing, had it not been for the oil smeared over him, the marks where he had struggled from the pool, and the distinct red imprint upon his neck.

For an hour or more we searched the desert, every possible hiding place in it, and were on the point of giving up when a shout from Jackson brought us on the run. He was standing beside a pile of rusty scrap-iron, his eyes staring, and pointing towards a huddled form lying in the shadow. I flashed my electric torch and sprang back with an involuntary cry of shock and amazement. There, limp and lifeless, his rifle still across the knees, was the dead body of Henderson, one of the patrol.

"Mother of God!" cried McGovern who, still shaking and trembling, had kept close by my side. "The divvil got the poor b'y. Glory be, sor, will ye now be after sayin' 'tis anny human sowl as does be doin' the killin's?"

We stared at one another with blank, frightened faces. It was uncanny, incredible. Whoever the murderer might be, he was possessed of almost supernatural powers, it seemed. Silently, unseen, unheard, unsuspected, he had stolen upon Henderson, had killed him before the poor fellow could utter a sound. And death must have been instantaneous; for otherwise, had there been any struggle, the rifle would not have remained across Henderson's knees. The only explanation was that Henderson, unlike McGovern, had been attacked while he slept. And this, I felt sure, proved that Henderson had been killed before McGovern had been attacked, for otherwise he would have been awakened by the big Irishman's frenzied shrieks.

But the amazing, the baffling events of that night were not yet at an end. When, bearing Henderson's body, we returned to the camp, Merivale and Rogers met us with two of the patrol, and at my first glance at their faces I knew that some tragedy had occurred.

"My God, Barry!" exclaimed Rogers. "The watchman at the hospital has been murdered! He couldn't have been dead five minutes when I found him—and, you may think me crazy or not—I caught a glimpse of the fiend that killed him. I'm not mad, I don't drink, and I was wide awake, but I swear as I am alive this minute that I saw a dim shadowy form rise from his body and vanish—yes, absolutely vanish in thin air, before my eyes."

"Nonsense!" I ejaculated, striving to steady my voice, for the manifest terror of the two was a bit contagious. "If you saw the man, who was he? What was he like?"

"Man!" cried Rogers. "It wasn't a man. It was a—a—thing—a—a—ghost!"

"Blessed Mary, protect us!" exclaimed McGovern, crossing himself devoutly and pressing close to my side as he glanced furtively into the shadows as if expecting some terrible demon to materialize. "Didn't Oi say 'twas no human sowl that was afther murderin' the b'ys. An' 'twas no man born of woman as fought wit' me, sor."

I forced a laugh. "You were dreaming, Rogers," I declared. "You *imagined* you saw something. None of us believes in ghosts or supernatural things."

"He was *not* dreaming," put in Merivale. "I ran up when Rogers yelled and I saw it, too. And it wasn't anything human."

I GASPED. I could not doubt the statements of two men. The watchman had been killed; both insisted they had seen a thing, some phantasmal object that had vanished. What *did* it mean? What could the thing—the death-dealing phantom—be? But I did not and do not believe in ghosts nor in anything supernatural. Everything, I have always argued, is explicable by natural causes, and recovering from my first vague feelings of dread and the tingling of my nerves at the uncanniness of the men's stories, I attacked the matter from a common sense point of view.

"Perhaps you both *did* see something," I agreed. "But if you did, it was no ghost. Even if we believed in ghosts—and *I* do not, and I don't believe either of you do—no one ever heard of a ghost injuring anyone. And the being who has committed these crimes has muscular strength, is flesh and blood. McGovern here was attacked by him, and he can tell you, when he gets over his mad superstitious terror, that it was no ghostly, spiritual, wraith-like thing that he fought with. If it appeared to vanish, it was merely because it slipped out of sight in the darkness. But of course there is a remote—a very remote possibility that it is *not* a human being. It may be some strange bird of prey, although I have no faith in such a theory. No bird, nor for that matter any animal, strangles men to death. In my own opinion it is some demented Oriental—perhaps a member of the East Indian Thugg clan. The manner in which a cloth is thrown over the victim's head, and the strangling, are both strikingly like the methods of the Thuggs. I believe that what you two saw was the cloth or blanket or poncho that the fellow uses. In all probability, he is nude or nearly so, and therefore almost invisible in the darkness. But the cloth he uses may be light-colored. As he escaped after murdering the watchman, this cloth showed for an instant before he gathered it up. That would have given the effect you describe, Rogers. And coming as you did from light into darkness, your eyes

would have failed to see his form, and moreover, your eyes being attracted by and focused upon the cloth, you would have failed to see his body. Anyhow, we now know the fellow's method. He smothers his victims' cries by his cloth—that is why there has never been a cry nor a scream when men have been attacked—and then strangles them."

"Fine!" exclaimed Merivale with sarcasm. "But how about those punctures? And what's his big idea? And how does he get by the patrols and get away?"

"I don't think the punctures as you call them have anything to do with the case at all," I replied. "How do we know they were not on the bodies of the people previous to their being killed? A lot of these Cholos have sores and eruptions, you know. And maniacs are notoriously clever in eluding those set to capture them. A naked Hindu or Chinaman can slip through the shadows where no white man could pass undetected."

"Well, I hope you're right," said Rogers. "*I* don't believe in spirits any more than you do, Barry. But I'll admit I had a bad turn when I saw that ghostly-looking, cloud-like thing float away from the watchman's body and vanish. But I expect the excitement is over for tonight. The east is beginning to lighten. It's almost morning."

But though the excitement was over for the night, as Rogers said, the coming of day brought most exciting news to us at Negritos. Sturgis called up from Lobitos, and my face paled when he informed me that two men had been found killed—strangled—at his camp. Hardly had he finished speaking when Colcord called from Talara and reported that four murders had been committed there. An hour or two later our wireless operator picked up a message from the Grace Liner *"Santa Julia"* with the astounding news that three persons—two men of the crew and a passenger—had been found dead upon the ship's decks that morning, and that all appeared to have been garroted. And, as if this were not enough, we heard from Paita that there had been a similar killing there.

My brain whirled; I could scarcely believe my senses, and the others were struck dumb by these incredible reports. How was it possible that such things could have occurred? How could the murderer have killed victims in Negritos, Lobitos, Talara—fifty miles away at Paita—in the same night? And even if it were possible for any human being to have rushed hither and thither over such an area, there was the incredible fact that he, it, whatever it was, had struck down victims aboard a steamship twenty miles from the coast.

Henshaw was the first to break the tense, awed silence. "Damn it!" he ejaculated. "It's impossible. I'm not superstitious and I'm willing to admit anything within reason. But this is too much. No human being could have done this. Either there's a crowd of the murderers—an organized gang—or else, well, I'm not going to admit the ghost or spirit theory yet, but if it's not the work of a gang it's the work of some damn force or power or plague and not anything human."

"McGovern will assure you it was neither plague nor disease," I reminded him. "And," I added, "Rogers and Merivale actually saw something. Isn't it possible—even if highly improbable—that it is the work of some new and strange creature—some bird or gigantic bat, some sort of vampire?"

"I'm beginning to think anything's possible," declared Henshaw. "And by the way, it looks as if we'd have to shut down if this keeps on. All my gang at Lobitos have quit and half the Cholos here have cleared out. McGovern tells me he's leaving for Lima this afternoon; the drillers and riggers are ready to quit, and every woman in the camp who can get away is going to leave this damned place by the first ship."

I nodded. "Yes, I know," I replied. "And I can't much blame them. Any murders are bad enough, but with the mysterious and uncanny added as they are here, no one wants to hang around. And no one knows who may be the next victim. Do you know, one thing that puzzles me is why so few of the whites have been attacked. Poor Major Stevens is the only white man killed so far, and the only other one attacked was McGovern."

"You forget those three on the *"Julia,"* he reminded me. "They were all white."

"And there have only been two women killed," put in Merivale.

"I don't see as those facts make any great difference," declared Rogers. "The fact remains that people are killed every night, that beginning with two the first night the—well, murderers—have increased their toll to eleven—if we include McGovern, who escaped by the skin of his teeth—last night. At that rate of progression there should be twenty-five deaths tonight, fifty or sixty tomorrow night and several hundred by Saturday."

"My God!" cried Henshaw, "I hadn't thought of it that way. Why, damn it, Barry, if this goes on everyone will be wiped out in a week!"

I forced a smile. "Provided Rogers' mathematical series of progression continues, there won't be a living man or woman left on earth in a year or so," I remarked. "But we have no reason to assume that the same increase will continue. Put it another way. The murders began here with two, and last night only one was killed here. Possibly the activities of the killers will be devoted to other localities in the future. But to my mind the all-important thing is to find out who or what they are, why they are killing people at random, and how to put a stop to it. It is not the number of deaths, but the fact that there are any; the fact that no one is safe—that is important. As a mere matter of lives lost—why, last year more men were killed by accidents right here in Negritos than all those who have been murdered. It's the manner, the cause of death, that makes it so terrible."

"Well, how are we going to get anywhere? And what more can we do than we have done?" demanded Merivale.

"I suggest we put a barbed wire entanglement around the camp," said Rogers. "If the—the thing—gets in through that, we'll know it's not human."

"And flood the whole damned place with searchlights," added Henshaw.

"We'll do both," I agreed. "And if the—well, the murderer—gets in and attacks anyone, we'll be able to see him at any rate."

BUT—though it sounds utterly incredible and impossible—despite the barbed-wire barrier and the flood of light, another person fell a victim to the mysterious death that night—and this time a white woman, Mrs. Veitch, the schoolteacher, who, throughout the terrifying and exciting times had remained unperturbed and had slept nightly on her sleeping-porch. And from such places as Piura, Salaverry, Trujillo and Catavia came reports of the same weirdly mysterious deaths.

"I tell you it's a plague or a disease," declared Rogers. "McGovern just imagined he was attacked."

Henshaw snorted. "And didn't you yourself swear you and Merivale *saw* something?" he asked.

"I did," admitted Rogers, "but I've come to the conclusion we were both deluded. We must have imagined it. If you can suggest anything within reason—other than some virulent disease—that can kill people hundreds of miles apart and can come in here through barbed wire and flood-lights and strike down victims, then I'll admit anything. But every detail is like the effect of some plague—the way it has spread, the unexpected way it strikes, the lack of wounds on the bodies, the condition of the blood of the victims. And those marks—or punctures—all indicate some terrible, unknown malady."

"One thing I have noticed," observed Henshaw, "is that this whole business has started since that earthquake and the change in the climate. It's only since the rains started and vegetation grew up that these deaths have occurred. That in a way would bear out the plague theory. I don't know, but it's possible that there's some germ in the soil that has been revived and made active by the wet weather."

"On the contrary," I declared, "we had no deaths during the intensely rainy period. All the murders have occurred since the rains stopped and the weather has been dry, and that looks to me as if it had no connection with the rain."

"Hmm, well, we may have a chance to decide upon that," said Henshaw. "It's clouding up and looks and feels like more rain."

He was not mistaken. It began to rain that afternoon; by nightfall it was pouring, and throughout the night it came down in torrents. And not a death occurred, not a murder was reported within the rainy area, although six men were killed and three women murdered about Salaverry and Trujillo, where no rain fell. Of course, as I pointed out, this might have been a coincidence, but when, on the four succeeding nights, it rained and no deaths occurred, and when the rain had extended southward to Chancay and not a murder took place anywhere, we began to feel that the rain had a lot to do with it and that Rogers' theory of the deaths resulting from some disease was the correct hypothesis.

And as days followed days and not a recurrence of the killings was reported, and as the weather continued rainy, we all decided that, regardless of the fact that none could explain it, no scientific or medical solution could be given, yet the mysterious deaths had been brought about by some germ or spore or microbe that was only virulent during dry spells after heavy rains. As Rogers put it: Some unknown deadly germ was bred or developed from a dormant state by the rain, but only became active when the weather was dry. But even he could offer no suggestion to account for the fact that the deaths occurred only during the night.

However, as the plague seemed over, as all were now convinced that there was no human element in the matter, and as the rains seemed likely to continue indefinitely—the Weather Bureau and the meteorological experts agreed that unless another alteration of the ocean's bed took place, the climate would remain permanently wet—those tragic, terror-filled nights were almost forgotten. The drillers and riggers, having had no opportunity to sail away, overcame their fears and returned to work; the Cholos drifted back to the camps from the hills, and the women abandoned their packing and preparations for departure and decided to live on at the camps.

Once more I was free to carry on my studies, and one of my first acts was to make a visit to the strange plants I had been so long forced to neglect.

Much to my chagrin I found them wilted, dead, and with only the scars on the back to show where the flowers had been. In vain I searched about, looking for fruit, seeds or even remains of the blooms. But several weeks had passed, the rains had been severe, and decomposition of all dead vegetation was very rapid. I was greatly disappointed, but it could not be helped, and transforming my botanical expedition into a hunt, I started through the jungle in the hopes of securing some quail or pigeons. I had gone perhaps a quarter of a mile when I reached the banks of one of the recently formed streams and, following up this, I came upon a partly decomposed, mushy, gelatinous object lying at the edge of the water. For a moment I thought it the body of some fish or animal, but there was little odor of decaying animal matter emanating from it, and as I bent nearer I discovered that it was the wilted and decaying flower of some unknown plant. Something about it appeared familiar, and suddenly it dawned upon me that it was the blossom of one of my queer shrubs. Quite obviously it had been blown or washed to the stream and had been carried by the current until it had found a resting place on the shore. It was a very poor specimen, but I examined it with great interest. From what I could determine, it differed but little from the flowers I had seen before in their nearly opened bud-form. The purple color had faded to a dingy brown, the white had turned yellow and was discolored, but I could still distinguish the gigantic bulbous calyx, the membranous fringe that encircled the long semi-circular petals, the thread-like filaments that I assumed were stamens, and the fragment of a thick, fleshy, spiny pistil. In full blossom and freshly opened upon its parent stalk, it must have been a gorgeous and truly remarkable sight, I decided; but it was beyond preservation and with a sigh of regret that I would probably never have the opportunity of witnessing the strange plants in bloom, I turned away.

But a few minutes later I came upon another of the decaying flowers. This time, to my amazement, I discovered that the jointed, leafless shoots of new plants were sprouting from the earth about it. Here was a most interesting state of affairs. There were no seeds or fruit but new plants were germinating from the flower itself, apparently. Still, upon second thought, I realized this was not so remarkable. Many of the Cacti and Bromeliads, I knew, would grow from portions of the stalks, even from the buds or flowers, and I had long before decided that my plants were closely related to if not members of the Cacti or the Bromeliad group. But more than anything else I was greatly elated to know that I might yet have a chance to witness the blooming of the growths. If the rains continued, they would spring up and develop rapidly, and in a fortnight more should bud and blossom. That afternoon I found several more of the old flowers, and in every case new stalks were sprouting up. At that rate, I thought, in a few months the whole mountainside would be covered with the plants, and I imagined what a truly wonderful sight would be presented when they were covered with hundreds, thousands, of the huge, magnificent flowers in full bloom. What a pity they were night-bloomers like the cereus! But even so, a hillside covered with the gigantic white

and mauve flowers when viewed by moonlight would be a sight never to be forgotten, and worth coming many miles to view.

ALMOST daily I visited some of the plants. They grew rapidly, seeming to absorb the remains of the flowers, and to my surprise I found them scattered over a very wide area. And my surprise was increased when, in speaking of them to my friends, Merivale said he had run across one of the growths far out in the area of the former desert, and Sedgwick declared he had been attracted to some of the queer-looking plants when he was more than half way to Lobitos. It seemed incredible that the big flowers could have blown so far, and I could only account for it on the supposition that there had been other plants that I had not located at the beginning of the rainy period.

When, soon after, I saw indications of the nearest plants budding, I became quite excited, and I watched with intense interest as the buds swelled, the flowers developed, and glimpses of the white and purple blooms showed through their rough brownish integument. Finally the time came when I felt that on any night the blooms might open and, fearing that I might miss the sight, for I felt sure the flowers lasted in their full perfection for only one night, I decided to visit the plants that evening. But the rain came down in torrents and when, after half-wading through the water and mud and drenched to the skin, I reached the nearest clump of plants, I found the flowers in exactly the same state as they had been in the day before. Very obviously they would not expand during rainy weather, and cursing myself for an idiot—for I should have known that this would be the case and that few night-blooming flowers open except in fine weather—I returned to camp, deciding to await dry weather before again going tramping off on such another wild-goose chase.

But I was doomed to bitter disappointment once more. I was unexpectedly summoned to a new oil field being prospected at Langosta Bay, and as luck would have it, dry weather commenced almost as soon as I left. Langosta, being quite out of the world and a mere prospecting camp in the desert—for owing to some freaky wind current or its location this area had not altered in climate like the rest of the coast—no news of the outer world reached us except when—once a fortnight—a Lima-Guayaquil plane dropped in on us with mail and newspapers.

Hence it was two weeks after my arrival at Langosta before we had any news of our friends at Negritos and Talara. And when the Ford trimotored plane came gliding down and we received our letters and the papers, we found them filled with most amazing and fearful tales. Everywhere, during the past week, men, women, children and even domestic animals had fallen victims to the baffling, mysterious death that stalked abroad at night and struck down silently, instantly. More than fifty had been killed in and about Talara; as many more had succumbed from the plague at Negritos, for by this time everyone was agreed that it *was* some terrible, unknown malady. Nineteen out of the total population of four hundred had died at Lobitos. Several of the native villages in the hills had been completely wiped out, and scores had been killed at Paita, at Salaverry, about Trujillo and back in the hills about Piura. A few deaths had even been reported from as far south as Casma and as far north as Tumbes, but the center appeared to be about Talara and Negritos, and a theory was advanced that the germs of the deadly, terrible disease were brought up by the drilling or by the oil. Work had completely ceased at the camps. Nearly all the Cholos and most of the whites had left the stricken district, but finding a rigid quarantine in force at Lima and in all other parts, the poor frightened inhabitants had been forced to return to their homes, where they were living in a state of terror almost impossible to describe.

Doctors and specialists were being rushed from the States and the Canal Zone to the locality with orders to make a thorough investigation and to locate the death-dealing germs, and the International Petroleum Company had employed the most eminent specialists at enormous salaries and with offers of veritable fortunes in the form of rewards to anyone who could discover a way of checking the inroads of this new menace to the entire population of the country.

The first to arrive had been Doctor Heinrich, the noted German biologist, who had been in Guayaquil making an intensive study of tropical fungus diseases of the skin. He had dashed to Talara by plane and had at once plunged into the problem with his customary energy and thoroughness.

BUT his first reports somewhat amused me, despite the seriousness of the situation. The deaths, he announced, were the result of some malady that attacked the respiratory organs, the effect being to smother the victim. This primary effect was followed almost instantly by a high fever, a constriction of the throat muscles, and the consequent rupture of small blood vessels. The germs, which he felt sure entered the system through the almost invisible openings in the skin, caused, as a third and final effect, extreme anæmia. Examination of the blood remaining in those stricken showed practical elimination of the red corpuscles, and in some cases practically no arterial blood whatever. Undoubtedly, the learned doctor proceeded to explain, the remarkable statements of McGovern and others describing the feeling of a cloth being thrown over their heads and a strangling arm encircling their necks, was the result of the smothering effect of the germs entering the human system. In mild attacks—which had been extremely rare—the symptoms had all been identical in this respect. All those who had been attacked described the smothering cloth, the pressure upon the neck, the mad struggle to escape. These were precisely the mental impressions that would result—so he averred—from the effects of the malady as he had described them. Pressure upon nerves and arteries, caused by the spasmodic contraction of the muscles affected by the germs, would induce pressure upon the brain and mental illusions. Hence the victims, feeling smothered, would imagine the cloth and the external pressure, and might quite reasonably be expected to imagine seeing objects that did not exist.

Hence, he argued with Teutonic logic, the fact that several persons had sworn to seeing indescribable forms rushing off when, by herculean efforts, they had recovered from the attacks, merely proved that they had been temporarily mentally deranged by the effects of the germs entering their systems. He had, he continued, made a very careful examination of all such persons, and had found them invariably excited, in a state of nervous exhaustion, and subject to violent and sudden fits of terror and to suggestion. He had endeavored to isolate the germs from samples of their blood, but so far without success, and he concluded by stating almost positively

that the disease was neither contagious nor transmissible; that it was in a way similar to tetanus, and that it was unquestionably the result of the alteration in climatic conditions. "In all probability," he wrote, "the germs have been present but dormant in the deserts for centuries. The rainfall has invigorated and propagated them, and as they become active and dry, they are carried by the wind to find lodgement upon their living hosts. It is a notable and suggestive fact that the activity of the disease is confined to dry periods and to the hours of darkness; also that while the deaths resulting from the disease have spread southward—with the prevailing winds—they have not spread northward against the prevailing air currents, except in a few isolated cases."

As preventative measures, he recommended remaining indoors after dark—he pointed out that with one or two exceptions no one in well-closed houses had suffered—bathing in carbolic or other disinfectant solutions, and refraining from excitement, overeating, exhaustive exercises or nervousness.

Poor old Doctor Heinrich! The very morning after he had published his report—which contained nothing we did not already know—he was found dead on the steps of his own home, another victim of the "night death," as it was now called.

And as if his death had been the signal, the rains had come again, and not a death had been reported since.

"Looks to me," observed Torrens, the long, lean-jawed Texas engineer, "as if what you-all need over at Negritos is a lot of fire-hose. These bugs don't look to bite when it's wet. Just keep a lot of hose playing 'roun' the camp and the bugs'll keep away."

"I'm not at all sure that such a scheme might not work," I said, "but it would not help the rest of the world. And there's another queer feature to the whole horrible business. Not a death has been reported from any of the sections that are still dry—from this district, for example, or from Cacamaquilla or the Huaranay country."

"'Pears like to me the bugs sure like places where there's sunshine after showers," drawled Torrens. "Mebbe they'd dry up and turn into bug mummies out in this desert country—feel like I might get mummified myself if I'm here much longer. And they're night birds, too. All jokin' aside, ain't it possible they can't stand sunshine or heat and that's why they don't wander thisaway? Anyhow you look at it, it's damn bad, and I'm sure glad those bugs ain't mooning around here. Lord A'mighty, it's smotherin' enough without them addin' to it."

THE next news we had told a very different story. The rains had recommenced, and for ten days not a death had been reported. The doctors and specialists had reached Talara, and had been busy making an intensive investigation, but I could not see that they had reached any definite conclusions nor had they come to any agreement, aside from the fact that all believed that the deaths were the result of some unknown and remarkable germ or microbe. Some held that it was a minute microscopic animal and not a true germ; others declared it the spores of some plant-like growth related to the fungi or moulds, and others were equally insistent that it was the microbe of a true disease.

Neither did they agree as to the origin, the means of dissemination and the habits of the thing. Some claimed it was the result of the climatic changes, others that it had been introduced from some other locality, and others declared that it was a new development or form of the mysterious Chan-Chan fever.

One savant was positive that the germs were carried by night-flying insects, and in support of his theory pointed out that such insects invariably appeared in large numbers on clear nights after heavy rains. His colleagues were equally positive that the germs were blown about by the wind, and as proof called attention to the fact that the strongest winds always blew at night, that during dry weather there was always a breeze, while during the rains it was almost calm, and he further argued that wet weather would lay the germs as it did any other dust. But there could be no argument in respect to the results and the deadly character of the new malady, and all the schemes so far tested had proved ineffectual in so far as preventing attacks was concerned. No, I am mistaken in that statement; no person who had remained indoors with doors and windows closed or screened had been attacked, and as all the white residents of the district had obeyed orders and had been careful to remain indoors after nightfall, no deaths of the whites had occurred, and only Cholos and other natives, who slept in open barracks or sheds, had succumbed, aside from several members of the patrol, who had been found dead at their posts. This, declared the authorities, shed a ray of hope. If everybody kept indoors from dark until dawn, there was every reason to think that the deaths would entirely cease, and, so argued the learned doctors, if the deaths could be completely checked for a time, the germs, finding no hosts, would soon die out. And in order to prevent all possibility of the germs finding victims, all the Cholos and Indians had been rounded up and were nightly locked in barracks and no live stock of any sort was allowed at large after sundown. And as it was now established that the "Night Death" was due to microbes and to no human or outside agency, all police and patrols were abandoned, and soon after sunset the entire country was as silent and deserted as the tomb. Just how well this plan had worked out could not be determined, because, as I have said, the rains had again commenced, and no one positively could state whether the cessation of deaths was due to the weather or to the precautions taken.

These were the conditions that existed when, having completed my work at Langosta, I returned to Negritos.

As it was still rainy, and as I felt certain that there was no danger as long as it was wet weather, I decided to have a look at my long-neglected plants. There were severe penalties provided for anyone violating the rule about going abroad after dark, but I intended fully to risk it if I found my plants were about to bloom, for I was determined that I would see the strange growths while in flower. I was not greatly surprised to discover that the growths had increased amazingly. But I *was* surprised to find how far and how much they had spread. They were in fact everywhere, scattered through the jungles, sometimes singly, again in groups, and in some spots forming miniature forests and covering large areas of the hillsides.

I found, however, that a comparatively small portion of the plants bore buds, although those that showed no indications of approaching florescence appeared as vigorous and as fully matured as the others. This I accounted for on the theory that a certain proportion were sterile (a condition that exists commonly among many of the cacti

and allied plants) and incapable of producing flowers, and my theory was more or less borne out by the fact that those that had no flower buds had developed leaves.

These leaves were remarkable growths and resembled the gray pendant lichen known as Spanish moss more than anything else. But they were quite different in structure, being composed of innumerable slightly wavy threads or filaments sprouting from a short, fleshy stem, and pale bluish-green in color. While examining these —for my interest had been transferred from the buds to the leaves—I discovered another interesting peculiarity of the remarkable plants. In every case where the growths had sprung up from the fallen decayed blossoms the stems bore the filament-like leaves and no flower buds, whereas—and this took me some time to discover—flower-bearing growths had sprung up from directly under the bunches of drooping, hair-like leaves. Not for some time did it dawn upon me that my strange plants had a most amazing life cycle. In other words, there was a two-phase cycle: the flowers producing non-flowering plants that in turn bore leaves (or perhaps flowers of another form) which, falling to earth, produced plants that bore only flowers. Such a mode of growth and reproduction was not, I knew, unknown among plants. Several of the parasitic tropical plants, known popularly as "air-plants," have a similar habit, the seeds producing non-flowering plants with jointed stems which break apart, each section developing a plant that bears flowers and seeds; and several ferns have a similar mode of propagating themselves; while among the marine plants the dual habit is not unusual. To me this was particularly interesting, as it tended to prove that the ancient forms of plant growth that had been brought into existence from long-dormant semi-fossil seeds by the rains had habits closely related to the marine forms of plant life. And as I had long held to a theory—and had written several monographs on the subject—that all plants originally were marine forms and that, with the receding of the waters and the increase of land, certain species and genera adapted themselves to a terrestrial existence, I was, of course, greatly pleased to find that, in my strange growths about Negritos, my theory was borne out to a certain extent. I was in fact quite convinced that many of the plants on the hillsides were very closely akin to existing marine forms and that my strange, jointed, rapid-growing, huge-flowered, night-blooming shrubs were the most closely related of all to marine growths.

Their amazingly rapid growth, their fibrous character, the semi-translucent flowers, all reminded me of bryozoans or algæ more than of true terrestrial forms of plant life.

And now this new discovery of their mode of propagation was another point in favor of my newly improvised theory.

Moreover, as I now realized for the first time, it would not be at all surprising to find the nearest air-breathing relatives of marine plants here in Peru. As I have said, all, or nearly all the plants, were extremely ancient forms that hitherto had been known only from fossils; and, in the second place, the country, as I knew from my paleontological studies, had been beneath the sea at no very remote period (geologically speaking) of the past. Hence, assuming that I was correct in my theory of the evolution of plant life, it would be natural that the earliest terrestrial forms of plant life and those most closely resembling their maritime ancestors, should be found here.

ALL of this of course passed through my mind far more rapidly than I have written it, and having located several plants that I judged would bloom that night —provided the rain ceased—I returned to Negritos, feeling that I had accomplished a great deal in support of my pet botanical theory. In my mind I was already composing an article on my discoveries for publication in the Journal of the International Society for Botanical Research.

It did not, however, stop raining that night nor for several nights; but at length the sun shone again, the last clouds drifted away over the Andes, and I prepared to sneak off and fulfill my long-delayed desire to witness the blooming of the plants that had interested me—in fact, I might say had obsessed me for months.

There was no great difficulty in getting away from camp unseen. Everyone was within doors, there was no patrol, no police, no guards, nobody to detect me, and I chuckled to myself at the thought of how different were the present conditions to those when the first mysterious deaths had occurred and the place had been alive with armed guards searching for an imaginary murderer or maniac.

My thoughts reverted naturally to the incidents of those days, to McGovern and his terror of something that had not existed except in his overwrought and superstitious mind; to Rogers and Merivale and to the terrifying, nervous dread that had filled all of us when the nightly deaths had seemed to savor of the supernatural and uncanny. Of course I realized I was taking a risk; there was a remote chance that I might be attacked by the malady that stalked its victims invisibly and unannounced on dry nights like this. But I am something of a fatalist; besides, scientific ardor is not easily dampened by thoughts of personal risks or dangers, otherwise few great scientific truths would have been discovered. But even a scientist is not always immune to vague, indefinable fears, and I felt a peculiar and far from pleasant or comfortable sensation of impending danger, as if some unseen, indescribable peril hovered near.

Once or twice as I glanced, half-nervously, at the star-bright sky, I fancied I saw dim, cloudlike, moving forms passing swiftly overhead. Little chills tingled along my spine as I recalled Rogers' horrified expression when he spoke of the "thing" he had seen vanishing from the vicinity of the dead watchman. Was it possible, I thought, that there *were* such things as ghosts, spirits, forces of which we knew nothing? With an effort and a forced laugh I threw off my foolish, almost superstitious feelings. Probably I had not seen anything, and if I had, what more reasonable than to suppose them drifting clouds or even large night-flying birds—herons, jabirus or wood-ibis perhaps. Still, it *was* dashedly lonely, eerie and mysterious out there alone, with the black loom of the Andean peaks in the distance, with the dark shadows of the hills, with the thousand and one unaccountable noises of the night on every hand, and with not a living soul, the glimmer of a light to indicate a fellow human being in the whole vast expanse. And though I had no concrete ideas nor thoughts of meeting anyone or anything, I involuntarily gripped the hilt of my machete—which I invariably carried on my trips into the jungle—and kept a keen watch on my surroundings. But nothing happened. I saw no signs of life—except an occasional night-hawk or a fluttering, burrowing owl, and presently reached the edge of the dense vegetation.

The plants that I had selected to visit were close to the

edge of the jungle, and as I had already cut an open trail through the growth, I approached the spot readily, noiselessly, and came within sight of the group of tall, stout, articulated stalks. I had not come in vain; looming ghostly in the darkness I could see three of the immense white and purple flowers fully expanded and looking as large as beach umbrellas in the uncertain light of the stars. For a moment I gazed at them entranced, drinking in the wonder and beauty of this floral display; then I stepped closer to examine the details of the blooms.

Suddenly I started and stared. There was no breeze here in the shelter of the hills, not a leaf of the vegetation stirred, and yet—incredible as it seemed—the flowers were moving, vibrating, pulsing, as if alive! Could it be the effect of the light or of my eyes striving to see clearly? No, I was positive it was no optical illusion. I focused my gaze upon one blossom, watched it. It *did* move! The bulbous purple calyx seemed to pulse slowly, deliberately, the white membranous fringe that was now spread flat, like a gigantic plate with convoluted edges, waved and fluttered; the long, fleshy multicolored petals undulated, and the slender, attenuated stamens waved, twisted and coiled about the great, rough central pistil. To my amazed, incredulous eyes the flower actually appeared to breathe, to be endowed with sensate life, to be struggling, feeling, exploring the air about it, as if searching for something. I was fascinated and at the same time filled with a nameless fear. Still staring, I drew back, my eyes fixed as though hypnotized upon that giant flower that now, for some inexplicable reason, appeared to me a horrible, uncanny, monstrous thing. And then my hairs seemed to rise on end. I felt a gripping terror, cold chills ran over me. Before my very eyes the great palpitating flower freed itself from the stalk and softly, silently, rose in air like a white balloon, and with stamens trailing and fringe undulating, it came slowly drifting towards me. I could not take my eyes from it. My mouth seemed dry. I was incapable of movement. I could not even cry out. For an instant it hovered above me and then—God, will I ever forget it!—the monstrous thing dropped swiftly, like a descending parachute, towards me. In a flash, in the fraction of a second, I remembered McGovern's description of the smothering, clammy cloth that had dropped over his head. In a flash I realized that it had been no hallucination, that the "thing," the "ghost," which Rogers and Merivale had seen, had been no figment of their imaginations. And in the same flash of intelligence I knew that the "night death" was no malady, no microscopic germ. I knew that it was these awful, silent, monstrous, living flowers of the mysterious plants.

A trailing, slimy thread-like stamen touched my cheek, and with a hoarse, inarticulate cry I leaped back. I felt a rasping something graze my neck. The air seemed suddenly shut off from my panting lungs, and with a mad, savage yell of frenzied terror I slashed viciously upward and outward with my machete. I felt the blade bury itself in some soft, yielding body. Thick, ill-smelling, salty liquid spurted over me. A pulpy, horrible mass struck my shoulder, and clinging, twining, snaky, sticky, nightmarish fingers seemed to close upon my left arm, my throat, my body.

Screaming, struggling, slashing, almost bereft of my senses, I tore the things loose, leaped aside and freed myself of the gruesome, awful thing that lay, panting, pulsating but writhing helplessly upon the ground. I felt weak, faint, almost paralyzed. Then some sixth sense caused me to turn. And just in time. Two more of the terrible, silent, deadly things were drifting down upon me! Before I could run, before I could move they were dropping towards me. But my first awful, superstitious terror had left me. The things, uncanny, terrible, supernatural as they seemed, were real. They were neither ghosts, nor demons nor spirit. They could be destroyed, killed.

Alert, watchful, I waited until the trailing, writhing stamens and the great flesh-colored pistil—that even in my deadly fear and excitement I mentally likened to a great boa with weaving, ominous head—were close above me. Then with all my strength I struck and leaped aside. With a soft swish the keen steel sheared through the mass. The thing veered, canted, capsized like a rudderless airplane, and with vicious blows I slashed it, hacked it until it fell. But I almost lost my life in doing so. The third monstrous thing was upon me. I felt its hellish, smothering folds about my head; the swaying, rope-like central organ rasped across my neck. Only the fact that I was stooping, bending forward, saved me. With a scream I grasped the thing, wrenched it loose and felt my hand lacerated and stung as if with a thousand red-hot needles as I did so. I thrust and lunged with my machete, and, ducking, dodged from beneath the enfolding mass.

I was sick, nauseated, weak with terror and with my efforts. Everywhere about me I knew were more of the weirdly, horrible, deadly things. At any instant a dozen, a hundred might be upon me. Even the stalk from which these three had been freed bore several more ready at any moment to float free and attack me. And overcome with such fear as I never knew could exist, panting, screaming, I turned and raced towards the open country and the camp. Once or twice I glanced back, expecting to see the dim, ghostly shapes pursuing me. But I saw nothing. Perhaps there were no others, maybe only those three bloomed into life that night. But even while I ran, while I spent my breath in shrieks that could have been heard in the distant camp, the truth dawned upon me. I had escaped the "night death" by the narrowest of margins, but I had solved the mystery. I knew the truth and, bizarre, incredible, impossible as it seemed, I knew the secret of those strange plants, of the death-dealing, living blossoms. The plants were land hydroids, gigantic representatives of those puzzling marine growths that seem a connecting link between plants and animals. And, like their small marine prototypes, they bore living, carnivorous organisms—gigantic jelly-fish—that floated through the air instead of through the water.

And, like the marine jelly-fish that bud from hydroids, these gigantic man-eating things, those vampires of the desert, in their turn propagated plant-like growths that bore seeds or spores which produced hydroids with their living independent organisms in place of flowers.

THAT I could think and could reason collectively and sanely while I raced, stumbling and fear-stricken, towards the dark camp may seem strange; but there are queer kinks in the human brain, and my subconscious mind worked along scientific lines even while my conscious mental processes were devoted to striving to reach safety before some of those ghastly, vampirish, night-borne creatures overtook me. Although I was unaware of the fact, I must have yelled and screamed in my excess of terror as I ran, for presently lights glimmered in the blackness ahead, and as I reached the first buildings I saw

a door open and plunged, exhausted and spent, through the portal. Even in my half-mad, half-fainting state I recognized Merivale and Johnson.

"Shut—shut the door!" I gasped. "Keep everyone inside if they value their lives! I—it—they—" I staggered forward and dropped senseless onto a couch.

I opened my eyes to find my two friends bending over me with anxious faces.

"Thank God you've come to!" cried Johnson. "What on earth has happened, Barry? Where have you been and what was that you said about 'it' and 'they' ?"

With a tremendous effort I steadied my shaken nerves and, in broken, jerky sentences told them of my terrible experience, of the horrible man-eating creatures that had attacked me. The two men exchanged glances, and I could see that they thought me mad or suffering from some hallucination. My anger was aroused at their skepticism, although Heaven knows they had every reason to doubt the truth of my wild and incredible tale.

"Damn it!" I shouted, sitting up. "It's true—every word of it. Look here—" I showed them the palms of my hands, bent my head that they might examine the back of my neck. Merivale whistled. There were the same red punctures that had appeared on the corpses of all those who were killed by the "Night Death."

Johnson glanced at me keenly. "By Jove, I'm beginning to believe you, Barry," he declared. "I admit the yarn sounded like the ravings of a madman at first. Gad! to think of gigantic, carnivorous jelly-fish flying through the air in the darkness—it gives me the creeps."

"And it bears out everything and solves everything!" exclaimed Merivale. "I knew that I never imagined that ghostly thing which Rogers and I saw after we found the dead watchman. And McGovern wasn't drunk or dreaming. By the Lord, Barry, you've solved the mystery. We must get Rogers and the rest and tell them."

But though Merivale and Johnson were convinced, the story was far too wild, too impossible and too fantastic for the others to swallow. Doctor Hepburn pooh-poohed it and advised Merivale to give me a sedative and put me to bed, adding that I had probably had a mild attack of the malady and had imagined the ridiculous details, but that it was my own fault for having disobeyed orders in going out after nightfall. Only Rogers, who like Merivale felt that his hitherto discredited statements were borne out by my tale, believed in my story. "Very well," I announced, "wait until daylight and I'll prove it to them. I wish to heaven some of these idiots had been with me."

AND though they discredited my statements—or at least put them down to the effect of the supposed malady—quite a crowd assembled the next morning to listen to my story at first hand and to see me attempt to prove the truth and accuracy of my tale. But when, reaching the spot where I had fought so desperately against the awful things, I pointed to the dismembered, pulpy, discolored objects upon the ground, and they saw the swollen buds of others upon the strange plants, doubts began to give way to belief. Still stubborn, old Hepburn would not give in. He declared that in his opinion the things were flowers and nothing more, that he didn't believe they could move independently, and that having fallen a victim to the "germ" of the plague while watching the flowers expand, I had imagined all the rest when in a semi-delirious state and had blindly slashed at harmless blooms of the plants.

"Possibly," I said scathingly, "as you are supposed to be a scientist of sorts, you may know the differences between plant and animal forms of life. In that case I suggest we examine these creatures that you claim are flowers—vegetable growths."

He snorted. But he could not refuse in the presence of the others. To me it was a most repugnant undertaking, and I shuddered as we examined the mutilated things. Presently Hepburn rose and extended his hand. "I apologize, Barry," he said. "You were quite right. Gentlemen"—turning to the group about us—"Doctor Barry deserves the greatest praise and our heartfelt thanks. He has solved the mystery of the Night Death; he has laid the ghost. These—er—creatures are unquestionably invertebrate animals—much like gigantic jelly-fish in their anatomy. They are literally vampires—blood-suckers—and, like their marine relatives, strictly carnivorous. These slender, thread-like filaments that I mistook for stamens are tubes ending in toothed suckers and through which the blood of their prey is drawn. It was the marks of these suckers that were impressed as punctures upon the skin of those killed by the Night Death as we have called it. In all probability the creatures in life exude some powerful poisonous emanation that renders their prey almost instantly unconscious, once the things have dropped over them. Do you not agree with me, Barry?"

I nodded. "Entirely," I assured him, "or rather"—with a laugh—"you now agree with me. The things are composite, polypod jelly-fish—communities of animals similar to the Portuguese Man-of-War."

"How in thunder can they fly?" demanded one of the men. "They're heavy, they haven't any wings, and you can't tell me that petticoat arrangement can lift 'em up by waving back and forth."

"I imagine," I replied, "that the balloon-like body is filled with some sort of gas produced by the creatures themselves. As they broke off from the parent stem last night they floated upward without visible effort. I—"

"Well, what's the answer?" asked Elliott, the camp superintendent. "Now that Barry's solved the mystery of the devilish things, the question is, "How are we going to stop it?"

"Chop down and burn all the damned trees," suggested someone.

"An excellent scheme as far as it goes," I assented. "But how are you going to destroy them all? There are thousands—perhaps tens of thousands—scattered everywhere. They grow so rapidly that by the time half are destroyed there will be as many new ones to replace them. Wherever one of these things drops to earth, a dozen shoots sprout up, and each of these produces dozens more that bear from three to ten of these vampires."

"Well, here goes to end these!" cried the first speaker as, leaping forward, he commenced hacking down the thick stalks. Others joined him, and in a few moments not one of the plants was left standing in the vicinity.

"Fine!" I commented. "But by tomorrow or next day, if you return here, you'll find twice as many have grown up. And as deaths have been caused by these creatures as far away as Piura and Chancay, there is every probability that colonies of the plants have started in those distant localities."

The men gazed at one another with blank faces. "For God's sake, what *are* we to do?" demanded Johnson. "If these hellish things keep on increasing, the whole of South America—perhaps the entire world—will be destroyed."

"Undoubtedly—if they are not checked," I agreed. "I—we—must think of some method of exterminating them. There must be some means, if we can hit upon it. But for the present the best thing is to round up every available man and destroy every sprout, every one of the fallen creatures in the neighborhood."

It seemed a herculean task, but two thousand men can accomplish a vast amount of work, and a small army began scouring the hillsides and valleys in a desperate war upon the sources of the terrible Night Death, while full accounts of my discovery and pleas for co-operation in extirpating the things were flashed by radio to every town and settlement within a radius of more than one hundred miles.

But this hand-to-hand battle I knew would never result in the complete elimination of the things. And it could not be continued indefinitely. It was essential that some means of wiping the things from the earth should be devised, and I racked my brains and conferred for hours with the others in what appeared to be a hopeless effort to evolve or invent some such means.

Somehow I could not get the idea out of my mind that the fact that the vampires moved only at night and only in dry weather lay the key to the solution, and yet, try as I might, I could not see how we could turn these facts to our advantage. And then sudden recollection of McGovern's experience came to me. Oil! Oil had routed the thing that had attacked him. We had oil in unlimited quantities. Why not spray the entire country with oil? I dashed to my fellows and explained my scheme, and instantly all fell in with it. We had three planes at Talara and a dozen more were available at Lima and elsewhere. Before nightfall our planes had been equipped with spraying apparatus, and the next day they were flashing —like gigantic dragon-flies—back and forth above the jungle, spraying every square foot of the country with the heavy oil.

Within a week twenty planes were at work. Soon the greenery vanished under the black coating, and far and near—to well beyond the most distant spots where the Night Death had taken its toll—the country was drenched with the shower of crude petroleum. The most careful search failed to reveal a single living plant of the terrestrial hydroids, and when no more deaths occurred, even in dry weather, and when the people, regaining confidence, remained out of doors at night, we judged that the operations had met with entire success.

Still, for weeks an airplane patrol was maintained, until Nature again took a hand and removed all danger of the recurrence of the terrible deadly plague. With the eruption of Orsini volcano in southern Chile, the ocean's bed again altered, the Humboldt Current resumed his long interrupted course and once again the west coast of South America became a rainless, barren desert. And until the climate again changes, the Night Death will be a thing of the past, the Vampires of the Desert will never reappear.

Perhaps this will never happen within the present century or again such changes may take place tomorrow or next year.

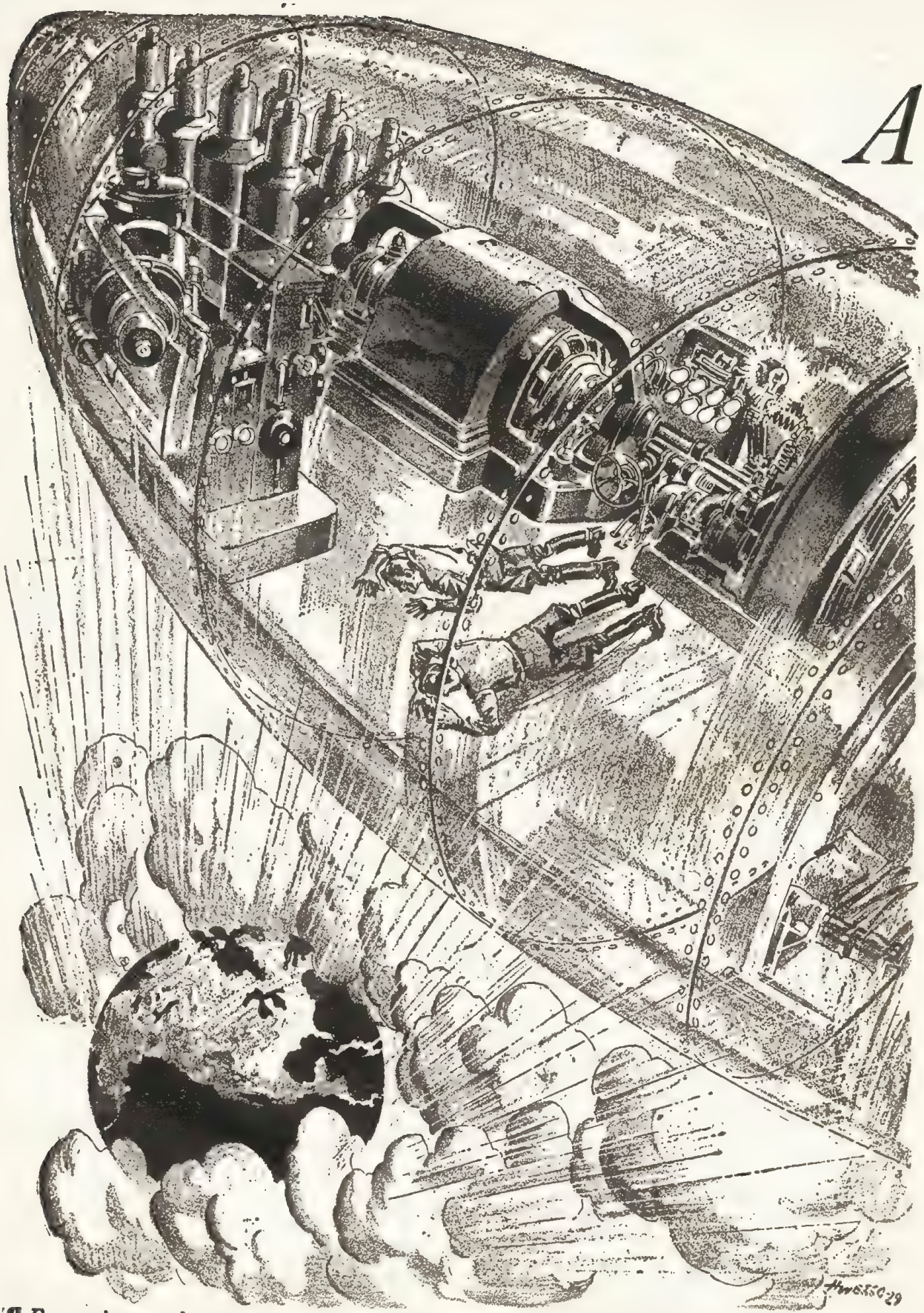
THE END

Sonnet to Our Magazine

We give too little time to introspection
  And, coward-like, become quite satisfied
  With daily failures. Thus we seek to hide
From all that lies ahead: for our protection
We try to shun the future's sure direction.
  Herein we err—we lose our strongest guide
  To our success, and are but firmly tied
With cramping bonds because we flout reflection.

This is an age when Fiction rules at will—
  When Science takes great strides and knows no bound.
The first is great, the second greater still,
  And in this book the twain are ever found
Clasped hand in hand. . . . Then let us laugh at sorrow—
For fiction written now is fact tomorrow.

—EDWARD PARSONS



¶ *For an instant they were pressed crushingly against the floor, and then they floated strangely free. There was the earth rapidly dropping away from them below.*

Illustrated by WESSO

Baby On NEPTUNE

By Clare Winger Harris and Miles J. Breuer, M.D.

WHEN a little spark from a distant electric discharge passed through a stone wall, it was a triumph for Heinrich Hertz, who may be taken as the first worker in Radio. Now we hear, without much comment, that a set made by one of the Edison students caught Byrd in the Antarctic. Is it such a far step, therefore, to radio to another planet?

It is to be expected that any work collaborated on by these two favorite authors will be unusual and appreciated by our readers. This story does full justice to their reputation. It is definitely "different," and well worth a studied reading.

A Dying Wish

IT must be admitted that interplanetary communication is still in a rudimentary stage; nevertheless some astonishing developments have already taken place. Beginning with the humble experiments of Hertz in 1887, progress has been variable but uninterrupted. Hundreds of brilliant men have devoted their lifetimes to the work. Episodes of intense human interest can be found along the way of this development. This account deals with one of them.

The story of any great achievement is marked by certain epochs, certain milestones, each of which is associated with the name of a genius. After Hertz came Marconi, who, in about the year 1896, expressed the existing theoretical knowledge in his concrete and workable wireless telegraph. He was followed by deForest, who about 1900 developed the three-electrode vacuum tube, making wireless telephony commercially possible. Then for a half a century nothing startling happened; efforts were devoted chiefly to the increase in transmission power and in the range of radio waves.

It was not until 1967 that Takats at Budapest experimentally confirmed the belief of scientists that radio waves, since they were electromagnetic waves of the same nature as light, could be reflected and refracted. Up to Takats' time we lacked the proper media for this reflection and refraction. Using the gigantic crystals of aluminum developed at the Kansas University by H. K. F. Smith, machining them into shape, Takats succeeded in focusing radio rays as accurately as the light rays from a movie projector are focused on the screen.

With his projection system four miles long, he focused radio waves of intensity receivable on the planet Mars. Two years later signals were picked up from Mars, Venus, and from the direction of both Saturn and Jupiter. That is how fast things moved.

It was demonstrated beyond a doubt that these signals were attempts of intelligent beings to communicate with us. Yet, by the time they were comprehended even vaguely, not one person was alive who had lived at the time of Takats' discovery. In 2099 a young kindergarten teacher, Miss Geneva Hollingsworth, at Corpus Christi, Texas, published a paper in *The Scientific Monthly* that gave the fundamental clue to the messages that had kept coming in over the instruments for one hundred and thirty years. The conceptions of number, size, rhythm, geometry, solar-system position, solar-system period are so simple and now so thoroughly understood that it seems ridiculous that it required more than a century to grasp them.

Though the fundamental conception was simple, the development of actual communication was a terrifically complex and tedious matter. Little Miss Hollingsworth was long dead and gone before the interplanetary code was developed. She would have shrunk terrified from the complicated proportions that her simple idea assumed, had she been able to see it put into practice.

But the year 2300 dawned with a fairly fluent communication going on with Mars, Venus, four of Jupiter's moons and one of Saturn's, and an unsolved mystery with regard to Neptune. Astronomers admitted that the bodies from whom intelligible messages were being received were in such physical condition that inhabitation by intelligent beings was a granted possibility. But, liv-

ing beings on Neptune! That was hardly conceivable. That bleak and distant planet was too cold and dark. Yet signals came from it. Were they intelligent signals from living beings or not? No one knew. Certainly no one had as yet been able to understand them. They were merely noises in the receivers. Yet they were too uniform, too persistent, too regular to be passed over as accidents or as inorganic phenomena. They demanded an explanation of one kind or another.

Then, in 2345, came the first successful interplanetary voyage. Thirty-five years before a daring explorer by the name of Bjerken had gone in a trans-geodesic coaster to the moon, but had never been seen or heard of again. Consequently now the eyes of the world were turned with eager curiosity in the direction of Rex Dalton, the Kentucky physicist, who, on January 7th, was starting out for Venus. The radios, which were buzzing at the last moment with announcements of the preparations for departure, suddenly gave out the news that the famous English astronomer, Myron Colby, would accompany Dalton on his perilous voyage.

The trip of Dalton and Colby was a memorable one, not only in the annals of astronomy and physical-mathematics but likewise in those of biology, since it proved that man's previous conception, that, if evolution progressed on two different worlds it must necessarily do so along parallel lines, was an erroneous one.

The *Pioneer,* which was the name of Dalton's space coaster, descended to the steaming atmosphere of Venus, and its astonished occupants gazed through the transparent walls at a strange sight. Lying beneath the pale fronds of gigantic, stringy and palm-like vegetation were thousands of huge worms!

Their heads were large and contained points which suggested terminal organs of the special senses. If the aggregation of special-sense end organs constitutes a face, the faces of these things were creepy, repulsive. They were intensely active, twitching and writhing and darting back and forth, in and out among each other. They seemed to be engaged in a tremendous activity and even handled a good many blocks and sticks and things among them. The earthmen shuddered and were disgusted at the slimy spectacle.

In a few moments the shell of their vessel was so hot that to save themselves they were compelled to start the refrigerating apparatus they had brought with them, in anticipation of just such a situation. They raised their vessel and cruised about, looking for cities, for intelligent beings, and finding nothing but slimy life, settled again. Near them was another intensely active bunch of worms. Suddenly a message sounded on their radio in the interplanetary code:

"Hello! Are you intelligent beings in the crystal sphere that dropped from the sky?"

Dalton coded back:

"We are humans from the planet Earth. Where can we find you?"

Then the two men gasped in astonishment when their radio said:

"You are among us now, looking at us. Come out. We wish to look at you more closely and see if you are as civilized as we are."

The two scientists looked at each other in puzzled bewilderment.

"We'd better test the atmosphere first," Dalton suggested.

They had come all prepared for this. Between double doors was a compartment into which all accumulating waste had been placed during their space journey. The inner door was opened, the waste material was placed in the chamber and the inner door was closed. Then the outer door was opened by electrical means, and the refuse was thrown out by electrical means, and the outer door was closed again. This always lowered the pressure, which was again made good by drawing compressed oxygen and nitrogen from cylinders.

Now they had registering thermometers, barometers, and hygrometers and burettes for automatically gathering samples of the outside air, which could be analyzed in a few minutes with their equipment. The results of their tests showed that the atmosphere resembled that of the earth, with some excess of carbon dioxide and oxygen; the temperature was 60° Centigrade, the pressure 790 millimeters of mercury, and the humidity 50 per cent.

"We cannot come out," Rex Dalton radioed. "Our bodies will not stand your atmosphere." They had to make some plausible excuse for not coming out.

These were the first scientists to return alive from an interplanetary voyage. Their trip may not have been entirely satisfactory from the standpoint of the romantic reader or the sensational news-spreader, but its scientific significance was epoch-making. It certainly gave the first evidence that intelligent beings can be found under other conditions than ours and in a form other than that which we have learned to know as human.

Recording on the Steel Tape

PROFESSOR MacLEAN still retained all the keenness of his mental powers, although he was ninety-two and confined to bed. Recently his death had been expected every day, for he was so weak that he talked with evident effort. Into his room every morning came Patrick Corrigan, his friend, and his successor at the university.

"Corrigan," the old man said, and the younger man leaned forward to catch the faint words, "this is a great day for me. People give me credit for having had much to do with the building up of interplanetary communication. I would be ready to die now, were it not for that mystery about Neptune. That makes me feel like a failure. But, now these young men have returned from Venus, I feel encouraged. Some day the question of Neptune will be answered."

For a moment the aged man's voice trailed off wearily, then he began again:

"Baffling, mystifying this Neptune business. Those low-pitched, tapping sounds that come through our instruments must mean something. There is a rhythm, a sort of mathematical suggestiveness about them. I could die in peace if I knew what they mean."

Corrigan waited respectfully and somewhat puzzled. He had a solution to propose for the Neptunian mystery and hesitated to present it because of a foolish superstition that he might be thus the cause of Professor MacLean's death. Finally he spoke:

"You followed the radio reports of Dalton and Colby's trip. They landed near Phoenix yesterday. I've been pondering on their reports since. Do you remember what they said about the quickness of the worm-people? Doesn't that remind you of the uncomfortable speed with which the Venerian messages come in? Only experts can make anything of them. Now, Mars is slower than we are; quite easy to receive in code. Now, suppose——"

The aged man sat up suddenly with an effort, bringing a look of alarm into Corrigan's face. The latter continued warily:

"Now, suppose that the messages from Neptune are so slow that they fail to register with us. Because of their slowness, we cannot synthesize them into sounds!"

Corrigan stopped suddenly. Professor MacLean lay white and still; there was no evidence that he lived. Corrigan stood in stunned silence. Presently the Professor raised a white hand and a wan smile played over his features.

"Correct!" he whispered. "It almost overcame me. Now go and work it out experimentally. I shall wait to hear from Neptune."

For a man like Corrigan the experimental working out of the idea was a simple and straightforward matter. The principle of recording radio impulses electro-magnetically on a steel tape was already well known. Assuming hypothetically that the tappings he had been hearing from Neptune were individual wave impulses, a simple calculation told him how fast they must be recorded in order that they might be reproduced as sound. He rigged up this much of the apparatus and set it to making permanent records of the Neptunian impulses.

In the meanwhile he adapted an ordinary transatlantic dictaphone to reproducing sounds from the steel tape. He had three days of tape when he was ready to try it out for the first time. He wheeled it into Professor MacLean's sick room. The aged scientist looked as though he could not last much longer; Corrigan wanted him to witness whatever the instrument had to tell them. With beating heart he adjusted the tape into the dictaphone and started the tubes.

"—scientists of other planets—"

That is what the instrument spoke, quite clearly. That was the result of seventy-two hours of patient recording of Neptunian messages. About a word a day. Corrigan looked anxiously at the bed.

"I'm still in good shape," Professor MacLean smiled. "I must live long enough to hear the first complete message from Neptune."

No youngster eagerly awaiting Christmas was ever more impatient at the lagging footsteps of time than was Corrigan during the six weeks which he set aside for the accumulation of the first message from Neptune. He tried to get himself absorbed in other work, but it was of no use. He could not stay away from the recorder; he hovered around it continuously, which only made the time drag more heavily. Finally, one momentous day, the apparatus was wheeled into Professor MacLean's room again, and with trembling fingers Corrigan threaded the steel tape. They listened for the voice, which began in the well-known interplanetary code:

"Elzar, physicist on the planet Neptune, sends greetings to the scientists of other planets. The Earth, Mars, and Saturn VIII we can hear. The others are too rapid for us. For ten of our years we have been sending out messages. Answer if you hear this. Elzar, physicist on the planet Neptune, sends greetings to the scientists of other planets. The Earth, Mars, and Saturn VIII, we can—"

Apparently a repetition of the message had begun. Corrigan turned his eyes to Professor MacLean to see how the long-awaited message affected the old man. A smile of peace and contentment rested upon the wasted countenance. Professor MacLean's indomitable spirit had waited long enough to hear from the mysterious Neptune; then it had taken flight to the place where Neptunian affairs matter little or not at all.

Does it mean that the scientist was stronger than the friend in Corrigan's make-up, when Corrigan first dispatched the reply to Elzar of Neptune before making Professor MacLean's funeral arrangements? Not necessarily. While this famous man's funeral was going on, under the lenses and microphones that were broadcasting it over the entire Earth, the slow tapping messages from Neptune were again being magnetized into the steel tape. It was over six months before the following message was heard out of the dictaphone:

"Elzar of Neptune has received the message of Corrigan of the Earth. For many years we have had analyzers for receiving the ultra-rapid messages from Mars and Venus; for many years our analyzers set to catch Earth messages have been silent. Today we are overjoyed to hear them speak. That tells us that you have understood our signals. Noting that you have already made a successful trip to Venus, and not having ourselves as yet conquered the problems of space-travel, we invite you to visit us on Neptune. You will find no lovelier spot in the universe. Our extensive forests and our wonderful cities will please and amaze you. I live with my child in one of the largest cities, exactly on the equator and turned to the sun at XIX-1118-00B00. That will help you find me. Our home stands on the edge of a cliff, overlooking a great sea, the greatest on the planet. We live happily, though occasionally sorrow is thrust into our midst, because huge and vicious beasts come up out of the sea and prey upon our people. Just yesterday a fine child was destroyed. Elzar bids you come and welcome."

A Trip Into Space

THE Neptunian scientist's invitation was a startling thing and would give Corrigan no peace. For months his mind dwelt on the idea of going to Neptune. Several other messages came from Neptune, all from Elzar, who had manifestly a powerful and interesting personality. Who but an astounding character like Elzar would think of extending an invitation across those reaches of space? And who but a genius like Corrigan would think of accepting it? For accept it he did.

The first thing he did was to call Dalton into the project. However, Dalton's space ship could not be used, for the simple reason that it was too slow for that enormous distance. Theoretically, the velocity of light was the upper limit of speed for space-ships of the geodesic-hurdling type. In practice, there are numerous objections and obstacles to such a velocity. Dalton had made his ship so that it traversed the 26,000,000 miles to Venus in ten hours, with a mean velocity of 850 miles per second. At this rate, it would take about forty days to cover the 2,707,000,000 miles to Neptune at the latter's nearest position. After considerable discussion, a speed of about twenty times that of the original ship was decided upon. This would give a velocity of between 16,000 and 17,000 miles per second which would get them to Neptune in two days or less.

Two days is not an unreasonable period, and Corrigan was afraid of higher speeds, not knowing what to expect from the Lorentz-FitzGerald contraction. The principle is as follows: a moving body contracts in the direction of its motion, so that at a velocity u, its length is $\sqrt{1-\frac{u^2}{c^2}}$ of its original length, when c expresses the velocity of light.

Therefore, at the velocity of light, the length of the moving body would be zero. Most physicists believed that this was merely a conception of relativism, due to the fact that the velocity of light is an arbitrarily chosen constant in a world where everything else is relative. But no one wanted to test the truth of this belief on himself.

The late afternoon of July 11, 2347, saw the geodesical flier, *Neptunian*, launched into the unknown, taking with it Corrigan and Dalton. The two occupants had placed themselves face downwards on the floor of the vessel, and waited with fast beating hearts for the second of severance from all earthly ties. They watched with interest the curiosity and anticipation depicted on the faces of those who crowded about outside. Corrigan manipulated the controlling levers, and the dark frame beneath them became a blank. For an instant they were pressed crushingly against the floor, and then they floated strangely free. There was the earth rapidly dropping away from them below.

For a few seconds nothing was heard within the vessel but the sharp intake of breath. Conversation was out of question at such an exciting moment. The *Neptunian* was one hundred miles above the surface of the earth before they looked around within the vessel and spoke to each other. Land, water, mountains, valleys beneath them were rapidly coalescing and rounding into a sphere. They had barely begun to feel warm from the friction of the atmosphere when they were out of it. After they left the atmosphere, Corrigan threw the switches into full speed. In a few seconds the earth appeared no bigger than a bass drum.

Elzar Explains

THERE followed a period of space-sickness, during which the explorers were intensely miserable. They were afraid they would die and then afraid they would not die. They wondered what insane idea possessed them to embark on such a trip. Eventually they sank into a stupor of several hours, from which they awoke considerably improved. The disorder did not wear off for about sixty hours, however. Dalton was the first to feel well.

Later researches by competent clinicians on space-trips have demonstrated that space-sickness is due to the removal of the effects of gravity from the fluid in the semicircular canals of the inner ear. These canals constitute a little organ which controls the equilibrium of the body and which is closely connected with the eyes and with the gastro-intestinal tract. Normally the fluid fills the lower halves of the two vertical canals and the entire horizontal canal. In a geodesic-hurdler this fluid is freely distributed over the entire interior of the canals, and severe vertigo, nausea, and vomiting result. Most people become adjusted to the condition in two or three days.

The complete isolation of the passengers of a space-coaster, their curious independence of what we have become accustomed to as natural laws, the blazing glory of the stars and planets in the black sky, the strange emotional experiences through which the travelers pass on seeing their mother earth become a tiny pin-point of light —all these things have been dwelt upon so much in the popular magazines that this is no place for them. One point has not been clearly brought out in any popular writings that I have seen. At their enormous velocity, why are not space-travelers in danger of instant annihilation by collision with loose masses of matter in space?

We know that space is full of flying bodies in size all the way from microscopic specks to small planets. A projectile shot at random stands a strong chance of colliding with one of them before it has gotten very far. But a geodesic space flier is in no danger from them, because it is not on a world-line. Stating the same thing in different words, the space flier is moving along a dimension at right angles to the three old dimensions. Theoretically speaking, it is not in the old Euclidean space at all. Practically speaking, space-travelers report seeing numerous bolides and asteroids, which, however, seem mutually repelled by their vessels. On a path at right angles to a geodesic, a repulsion exists similar to that of like magnetic poles, and it is not possible to approach a mass of matter of any size whatever unless power is applied and the course changed.

By means of a telescope with lenses of the marvelously refractive substance, protite, Corrigan and Dalton studied everything they could see from their vessel. They passed within a half a million miles of Uranus, a mere stone's throw.

"I wonder," mused Corrigan, studying the pale, golf-ball sized disc, "whether Uranus is a dead world? Doesn't it seem a logical explanation of his constant taciturnity?"

"It seems to me," said Dalton thoughtfully, "that it is the inevitable trend of the forces of Nature to build up Life. Life arises out of matter, regardless of what the conditions are. Even on our own planet Life exists in sections that would seem most unfavorable: the burning sands of the desert and the frozen seas of the polar circles. Life, yes. But not necessarily Life as we conceive of it."

"You may be right," Corrigan sighed.

ON each of the fifty days observations and calculations of position had been made. Almost at every hour they knew exactly where they were. Therefore, when the disc of Neptune began to fill the entire sky, they gradually altered their angle with the geodesic and slowed down their speed, with a view to landing. For many hours they had been unable to sleep because of their wonderment at the amazing world that filled the observation frame beneath them. Great cloud strata pierced by jagged mountain peaks, which rose to heights of twenty-five miles above the planet's surface, veiled the greater part of the strange world from their eyes.

They had but a dusky twilight by which to see. Shadows were black as ink; a favorable reflecting surface shone dazzlingly. However, with pupils widely dilated and retinas rendered hypersensitive by their long absence from refracted light, they were able to make out all details comfortably and distinctly.

"We seem to have struck an uninhabited portion of Neptune," commented Dalton, unable to keep an undertone of misgiving out of his voice. "Like Martians landing on the Sahara desert or the polar wastes."

"All right, we'll move around and have a look at other places," Corrigan replied and suited action to word. Soon the awful grandeur of the bare, bleak landscape was passing in panoramic review beneath them. One day, two days they circled about, at sixty miles an hour, at a thousand miles an hour, but found no variation from the original scene that had at first staggered them. Nothing but dry, fearful canyons and bare, towering crags tumbled in chaotic masses, their tops forever buried in the cloud strata.

"Hm! This *is* funny," Corrigan mumbled through set lips. They circled the planet about the equator and then from north to south, but saw the same dismal rocks, the same cold, scurrying vapors. Bare rock, swirls of snow —truly a strange topography for a civilized world!

"There must be some mistake in the messages," Dalton offered.

Dalton didn't understand interplanetary communication as Corrigan did.

"Mistake!" Corrigan exclaimed. "A mistake in the interplanetary code is more difficult to admit than what we see below us."

"Suppose the messages came from some other planet?" Dalton asked.

"Stop and think," Corrigan reminded. "We translated the word 'Neptune' from the code into English. But the code signal for Neptune gives the size, distance from the sun, and position relative to other planets. It is no more possible to conceive that the message came from some other planet, than it would be for me to imagine that some other person is talking to me with your voice. There can be no doubt about the following facts:

"That our message came from Neptune;

"That this is Neptune; and

"That this is an uninhabited world.

"From the bleakest mountain summits to the depths of those black gorges, there is neither plant nor animal life. Now, explain it as you will. I can't do it."

"Perhaps," suggested Dalton, "the Neptunians live in caverns within their planet. Let us land and investigate."

"No," reminded Corrigan. "Remember that Elzar's message said that he dwelt on the equator on a cliff that overlooked the greatest sea on Neptune. Now where's the sea? We've scoured this whole dead globe, and found no sea."

Dalton leaped up in sudden enthusiasm.

"Anyway," he exclaimed, "we can locate the spot he mentioned by means of his bearings, and see what's there."

No sooner said than done. In a couple of hours' travel and a half hour's calculation, they located XIX-1118-00B00 on the equator. There indeed was a looming cliff, and below it a chasm, that was a veritable abyss into nothingness. But the cliff was bare and bleak; naked rocks jutting out of dry ice, with snow sifting about. And the chasm, of which no bottom was visible, was not a sea, for there was no water.

Dalton proceeded to test the atmosphere, as he had done on Venus. When they hauled in their instruments and calculated their data, they were utterly astounded to find the following figures: temperature —260° Centigrade; pressure, 30 mm of mercury; humidity zero; chemical composition, traces of inert gases of the neon type, amounts of hydrogen, oxygen, and carbon-dioxide almost too small to determine chemically.

"That stuff out there must be hydrogen snow," gasped Dalton, sinking into a chair.

"Certainly no form of life can exist there," Corrigan sighed. "I can't explain it."

And so, with heavy hearts they turned the *Neptunian* back towards the Earth.

Once more back in their homes on Terra, the disappointed scientists told the story of their fruitless journey into the depths of interstellar space. But, a surprise was in store for them. During their absence there had been time for the exchange of a few short messages with Elzar. These had been received and answered by a certain promising young man by the name of Sylvester Kuwamoto. (This curious surname is a relic of the epoch, several hundred years ago, when races and nationalities existed separately on earth. His name is suggestive of the Japanese race and nation, which occupied the island of Japan, spoke a curious language, and was quite isolated. However, it was not long before Japan joined the general intermingling of races which has resulted in making the population of the entire globe a homogeneous race.) He had been little more than a sophomore student in Corrigan's laboratory prior to the latter's trip into space. But he had shown such a brilliant aptitude at the message-storing machine, that Corrigan had immediately given him a permanent position in the laboratory, and put him in charge of the Neptunian affairs. He had sent and received the following messages:

Kuwamoto: "Two of our scientists have gone out in a space-ship to visit you on your world. They will arrive in forty-nine of our days. Watch for them."

Elzar: "We are happy because we shall have visitors from the Earth."

Kuwamoto: "Please notify us as soon as you see them."

Elzar: "It is now the sixty-second terrestrial day, and your people have not yet arrived. I fear that the space-ship has met with disaster."

Two days after this message was interpreted, Corrigan and Dalton arrived. Corrigan immediately radioed this message to Elzar:

"There is some great error. We went to Neptune, looked it all over, but saw no sign of life or habitation. We found the spot which you designated as your home, but found nothing. We found conditions there in which no kind of life could exist. Can you explain?"

The reply was anticipated eagerly, but required the usual wait of three months to record, before the few moments of interpretation could be enjoyed. It ran:

"We watched closely for you, but did not see you." Then followed a check of the solar-system data on the Earth and Neptune at critical periods during the voyage.

Direction finders and range computers were put to work. Interplanetary code checks and re-checks were made. Neptune's position was checked back and forth. The messages were from Neptune. Corrigan and Dalton knew they had been there. Could they convince the public that they were telling the truth?

What Life on Neptune?

FIFTEEN months passed, during which Neptunian affairs remained a puzzle to the entire world. There was some joking at the expense of Corrigan and Dalton, though I doubt if any serious-minded person ever doubted their account of their voyage. On the other hand, there were people who scoffed; scoffed at the accounts of the voyage, and at the Neptunian messages which continued to arrive with systematic precision at comparatively regular intervals of from three to six months—but which shed no light upon the mystery.

Patrick Corrigan and his assistant seemed to live primarily for the moment when, the steel tape threaded, they could sit in their laboratory and listen to the words of Elzar. They had grown very fond of the scientist of another world. His cheerful, philosophizing personality seemed to come out of the void, encouraging them to find him, wherever he might be.

One day in the laboratory, after the interpretation of a particularly encouraging message, Sylvester Kuwamoto began to speak to Corrigan, thought better of it, cleared his throat to cover his embarrassment, and lapsed into silence.

"What is it?" queried Corrigan kindly. "Never mind me, you know."

"Nothing special," the younger man demurred; "only —I can't quite explain how I feel about Elzar. It is sort of—well, it may sound silly—but like talking with God. We can't see him, we can't find him; yet know that he exists and that he is good. Do you—er—see what I mean?"

"Precisely," Corrigan replied. "To be frank, I've had somewhat the same feeling myself, though I've never tried to put it into words. Elzar's personality is, well, a pervading one. We feel its influence through millions of miles of space! Too bad we can't know what he *looks* like. I can't help imagining him as an old man with a flowing beard and a kindly face. We human beings put a lot of stock in our sense of sight, don't we? Unless we can *see* an object, we feel that we know little about it. Yet, I'll venture to say that in time we'll develop other senses than our five by which we become acquainted with our environment."

"That may be," replied Kuwamoto musingly; "but I, for one, am not willing to wait until more senses develop. I'm going to use the five I've got, and I want to see Elzar!"

Corrigan merely sighed.

After Corrigan left, Kuwamoto sat buried in deepest thought.

"Man's reason exceeds any of his five senses. Reason is more important at this age than instinct and emotion which have served their terms in the past."

A strange idea, vague and incomplete was hovering about the outskirts of his mind, trying to get in. There was an explanation to this Neptunian puzzle; he almost had it within his grasp, when suddenly, elusively, it evaded him. There was something Dalton had said, that ought to be the key to it. For weeks he was moody and absent-minded. He read minute reports of the Venerian and Neptunian trips, and talked repeatedly with Dalton and Corrigan.

Pretty soon he grew more cheerful, and carried sheets of scribbled paper stuffed into his pockets. Early one morning he raced panting into Corrigan's laboratory. By sheer compulsion, he sat down and forced himself to be calm.

"Shut it off!" he said, pointing to the apparatus on which Corrigan was working, also in the effort to solve the puzzle of Neptune. "You'll never find the answer that way."

"You've got it!" exclaimed Corrigan, dropping his instruments. "Tell me!"

Kuwamoto began impressively

"Exactly 500 years ago, Leverrier discovered Neptune —not with material instruments, not with his five senses, but by abstract reasoning. From the disturbances in the orbit of Uranus he predicted Neptune's position so accurately that Galle in Berlin was able to turn his telescope to that spot and see it. Likewise, *abstract reasoning has discovered the inhabitants of Neptune.* I can tell you how to make an instrument to see them."

Corrigan stared.

"Neptunian processes are slow?" Kuwamoto argued.

Corrigan nodded.

"And you couldn't see the people?"

Corrigan shook his head.

"Nor the animals? Nor the plants? No life?"

Corrigan ceased responding.

"Mountains of ice. Hydrogen snow. Low temperature. Low pressure. And yet there is life there. Life that was invisible to you. Can't you see yet?"

Corrigan waited patiently. Kuwamoto went on:

"Out there in that rare atmosphere, so rare that you could just barely detect it with instruments of precision, no life such as we know it, can exist. It must be a different form of life. The living things are gaseous bodies! Don't you see? Composed of cells, with nuclei and chromosomes and everything. But the cells are huge ones, composed of gases instead of colloids."

Corrigan sprang to his feet. His face was pale with sudden excitement.

"By God! You're right!" He slammed his powerful fist down on the table, causing a couple of flasks to topple and crash. He never noticed their contents spreading across the table and dripping down.

"Living creatures," Kuwamoto continued, "intelligent creatures, plants, animals, all composed of gas-cells. Huge cells with slow chemical processes, all going together just like the cells do in our own bodies. Only out there in that cold, metabolism is slow."

They sat a while and stared at each other.

"But it is Life, just the same!" Kuwamoto exclaimed. "Only different from our kind of life. That's all."

Corrigan pondered.

"That hypothesis explains all the data thus far observed. Now to test it further experimentally. That means another trip to Neptune." He slapped his knee.

"A viewing apparatus for seeing Neptunian gas-life will be a simple thing. Some sort of fluoroscope such as is used by medical men in X-ray work. And an apparatus for storage-recording of visual images; we can take motion-pictures at the rate of one a minute, and then project them at the normal speed of sixteen per second."

Corrigan was already figuring with his pencil on a pad, while Kuwamoto talked on:

"A little experimental work right here in the laboratory will enable us to determine in a preliminary way just which type of electromagnetic vibrations are reflected from the surface of masses of gas. Too short a wave will go on through because it gets between the molecules; whereas too long a wave will penetrate molecules and all. When we find approximately the right length, we can get together our photo-electric receiving bulbs, and take them along to make the final adjustments on the spot. An ordinary television screen will do for the viewing end. You see: find the wave-length reflected from the gas-surfaces, devise a photo-electric cell that is sensitive to it; and project the images from the photo-electric cell on an ordinary television screen."

That night Corrigan tossed restlessly in his sleep.

"Gas-cells. Of course!" his wife heard him mutter.

A Visit to Neptune

PRELIMINARY experimental work was more tedious than the enthusiasm of the first moment had reckoned on. It was all straightforward stuff, nothing about it difficult to understand; but the mathematics was complicated, the experimental details were numerous and tedious. Thus it was a good two years after its return from the first voyage, that the *Neptunian*

was taken out of its hangar and "tuned up." The second successful voyage to Venus in the old *Pioneer,* and the two disastrous expeditions to Mars, which took place in the interval, are too well known to require notice here.

This time the *Neptunian* contained three voyagers, for Dalton would not be left behind, and Kuwamoto had to be there. The vessel could have carried a dozen people, but the very applicants who were most anxious to go on the expedition were the least desirable ones from the scientific standpoint. Corrigan decided that news reporters and curiosity seekers would have to wait until this travel was commercialized. The space that would have served for more passengers was given over to a radio and television apparatus for more perfect communication of the vessel with the earth. They left with as little publicity as possible. Publicity was becoming unwelcome to Corrigan.

The only matters of interest from the fifty-day voyage are Kuwamoto's notes on the passage of time. He states that the time did not seem that long. Time apparently counted according to what they did. There being little or nothing to stimulate them, much of the time they rested passively, and may even have been in a sort of unconscious state produced by the lack of external comatic stimuli. Kuwamoto thinks that the only thing that kept the entire period from seeming like a blank in the retrospect was his period of space-sickness, and the regular calls of the warning-clocks by which they made their observations of position. This suggests that space-voyages ought to prove valuable for invalids of the nervous-exhaustion type.

Corrigan and Dalton felt strange emotions when they saw again the same sterile mountain peaks and bottomless abysses. They cruised about for a few hours before landing, in order to let Kuwamoto see the general features of Neptune. Then they located Elzar's home on the equator, selected a resting spot, and landed the machine. Immediately everyone went to work. Dalton was taking straight photographs, which was possible with large lenses, sensitive plates, and long exposures. Kuwamoto set about erecting the viewing apparatus; he was feverishly busy, with an expression of wonder on his round, wide-eyed face. Corrigan began some radio messages back to the Earth, reporting their arrival.

In comparatively few hours, Kuwamoto's adjustments were finished. The two machines, one for direct viewing and the other for taking the storage-movies, were placed with their huge lenses against the transparent wall of the ship.

From within their warm vessel the travelers gazed out upon the stern and forbidding character of the landscape without. Directly centered in their frame of observation was the gently-sloping, plateau-like area that was midway between a rugged mountain with a cloud-shorn summit and the vast chasm that Elzar called the sea. Bare, jagged rocks; ice, dry and solid as rocks; flurries of carbon-dioxide and hydrogen snow—these were printed indelibly upon their brains as they sat before the infra-red viewing box, and switched on the current. The two older men calm and silent, the younger man half hopeful, half fearful, waited for the tuning of the machine. Then, abruptly, Kuwamoto switched on the amplifying tubes.

Corrigan remarked afterwards that his first impression was that of looking into a kaleidoscope. Dalton's impression, again, was that of looking at an empty room, and suddenly seeing it richly furnished. The brilliant coloring of the scene took their breath away. The gaunt mountain was covered with great billows of luxurious vegetation, and the plain was a wealth of flowers, trees, and grass, all inexpressibly huge in proportion to the people looking at them. The most beautiful sight of all were the great, opalescent bodies of varying shapes and sizes that were scattered about the landscape at varying heights above the ground. Their colors shimmered and flashed throughout the entire chromatic scale of visibility.

But, it was only the scintillating of the flashing hues that gave any variety to the scene, for everything was motionless. Not a movement, not a stir, anywhere. The immobility of the iridescent, vari-formed objects was disappointing. It was like a brilliantly colored stereopticon picture.

The three men looked at each other with emotions that cannot be described. Has anyone tried to picture what Balboa felt when he first saw the Pacific Ocean from the "peak in Darien"? A few moments of breathless silence, and then some trivial remark to break the constraint; that is the way scientific men take these situations.

"Medusae!" Dalton exclaimed. "Jelly-fish, a thousand times magnified!"

"And everything frozen solid," Kuwamoto remarked.

They moved their vessel here and there, to get new views, watching the scenery on the screen of the infra-red view-box. With intense interest they viewed the multicolored festoons that adorned the landscape; huge, umbrella-shaped bodies that clung to the hillsides. Exclamations of delight issued from their lips from time to time, as some amazingly lovely object came within their range of vision.

"These medusoid forms must be the people—the intelligent beings," Corrigan remarked. The others assented.

The vast chasm was now a sea; why it should happen to be a deep greenish blue is not yet explained; but that was its color. Down in its depths could be seen vast, gloomy bulks; and on the surface, here and there, an enormous, slimy bulk, like a gigantic paramecium—obviously the ravenous beasts that Elzar feared so much. The three observers were hushed for a moment when they noted the contrast between the repulsive bulks of these beasts, and the brilliant and delicate tracery of the intelligent inhabitants. They brought their machine back to their original landing place, after hunting about a few minutes to find the location.

"Here we are," Corrigan finally said; "same old place."

"And yet, not quite the same," Dalton replied. "Look, some of these things have moved. They have different positions. Kuwamoto is right."

It was true; there was a slight change of position throughout the entire group of huge, globular objects.

"That must be Elzar!" Corrigan pointed with suppressed excitement to a brilliant umbrella-shaped body in all hues of purple, floating near a resplendent structure not far from the cliff's edge.

Kuwamoto nodded. He was busy adjusting the motion-picture taking machine. He had it trained on Elzar and his house.

"One picture a minute," he said. "In about six weeks we can see some action on this film. In the meanwhile, why don't you talk to them?"

IF waiting for Neptunian messages on the earth was an anxious suspense, imagine the patience that was required of these three men enclosed in the narrow ship, waiting for six weeks, until the message came to them, tick by tick. This six weeks, unlike the fifty days of in-

terplanetary travel, were the longest any of the three men had ever spent. Fortunately, they were all three of them scientific men, and knew how to find intellectual pursuits to pass away a large part of the time.

Immediately on their arrival, Corrigan had coded:

"We are here. Look for us on the plateau near your house."

After those interminable six weeks had passed, after every possible aspect of the scene had been studied, and every animal and plant form studied and photographed (they could not move their vessel because the motion-picture camera was constantly in operation), they finally threaded their steel tape into the dictaphone, and listened to Elzar's voice; through the vacuum tubes and condensers, this deep and kindly voice was coming from that purple, cape-like mass with innumerable streamers that hung up above the others:

"Welcome my friends, I am overjoyed at your arrival. I see your ship now, though you must have waited long and patiently to enable us to see you. Before that, your movements were so rapid that we could not see you. We realize that yours is the difficult end of this communication problem. From your message, I judge that you have recognized my house. Me you will recognize because I am larger than any of the other people in this group. My child resembles me in miniature, and is—wait a moment—oh—oh—help!——" and then silence.

Elzar's wail of distress brought the two men to their feet in instant alarm. All eyes turned frantically to the infra-red view-screen. Could it be possible that consternation reigned over that peaceful scene; that events were at this moment rising to a climax that spelled some terrible calamity?

"We can do nothing!" cried Kuwamoto hopelessly. "Let us run the film through and see what is the matter."

The Baby on Neptune

WHILE Kuwamoto prepared the film that had required six weeks to make, Corrigan radioed back to Earth, asking the receiving stations to get their television sets in readiness to receive the first reel of a possible Neptunian drama. Kuwamoto slipped his reel of film into the projector. For the first time the observers saw the frozen scene in motion. Trees swayed, multi-colored Neptunians glided over the ground or floated through the atmosphere; the waves of the sea tossed, and a huge bulk showed itself anon; especially the Neptunians were busy on tasks and purposes of their own.

They all gazed at Elzar in silent admiration, aware of his dominance over the rest of the Neptunians. He was a truly remarkable organism. If he had been beautiful in immobility, he was a thousand times more lovely now. He resembled nothing so much as a brilliant, multicolored chandelier of gigantic proportions, scintillating throughout the chromatic scale with each pulsation of his delicately constructed body. Like fairy gossamer were his body tissues; and yet the vastness of the whole gave an impression of sturdiness and power. His prevailing hues were purples, though he contained all the colors of the spectrum, harmoniously interwoven.

"He is the only one whose dominant color is purple," Corrigan remarked.

"Appropriate, for both his brain and his body are exceptional. Look! there is a smaller being with much the same coloring!" Kuwamoto replied.

"That must be Elzar's child," declared Corrigan.

As they watched, Elzar rose above the other Neptunians about him, and the observers realized that he was just then talking to them—making the speech to which they had listened a half hour before. He remained quite motionless, and the observers, more interested in the moving objects, allowed their eyes to wander from him to his diminutive counterpart, who was moving away in the direction of the cliff edge that overhung the sea.

"Great Heavens, look at that!" Kuwamoto's exclamation was unnecessary, for they all saw it simultaneously.

Out of the depths, a black, slimy form had risen, with the fluid of the sea splashing off its glistening sides. It seemed to spy the Neptunian child, for swiftly it turned toward the little purple bell. The deadly intent of the loathsome entity was obvious to all the observers. It reached out great pseudopods, slimy, flowing, shapeless projections, preparing to wrap them all around the bright body of the little one. Swiftly it closed toward its victim, while the men in the space-ship remained rigid, frozen in their positions; the little Neptunian was all unconscious of the impending calamity. Ready to fall upon the child, to close about him completely, when Elzar suddenly woke to the danger, whirled about, and sped toward the scene of the tragedy. Then—the picture was ended, and the men gazed stupidly at the blank screen before them.

"Ye Gods!" shouted Kuwamoto. "Just at the crucial moment, like a cheap novel serial! I suppose all we can do is nothing, and Elzar's child has been devoured by the filthy beast."

"Not at all, not at all!" Corrigan cried excitedly. "Remember it is all going on very slowly. Let's find out for sure!" He rushed toward the window and looked out.

Nothing but bare black rocks and frozen air. In his excitement he had forgotten the viewing machine that rendered visible the tenuous gaseous matter on this cold planet.

Through the infra-red visual transformer, the scene which had become so familiar during the past week lay before them. Now it was more comprehensible, since they could read it in the light of what they had seen happen on the moving projection.

"Thank God! It isn't too late. . . . But what can we do? By the time——"

Kuwamoto interrupted Corrigan.

"It is true that the distance between the monster's pseudopodia and the little Elzar is decreasing. But, it is slow. Let us think. We can act fast."

"We're enclosed in this machine and can't get out——"

"Those things are so big. Even the little Elzar—far too big for us, we can't handle him. Destroy the monster somehow—if we could do that——"

In helpless despair they stood gazing upon the scene of the tragedy. The monster seemed such a short distance away from the beautiful little creature.

"Blow him away!" Kuwamoto shouted. "The nitrogen tanks!"

The others comprehended his idea instantly. Corrigan moved the space-vessel close to the scene of the tragedy, gradually, with the aid of the infra-red screen, working it into a position between the beast and the little medusoid child. On the viewing screen, the two Neptunian creatures towered high above the apparently tiny earth machine; it looked like a toy between them.

Dalton and Kuwamoto placed a cylinder of nitrogen

in the air-valve compartment that was used for refuse disposal, retaining control of its stopcock by an electrical connection, and aiming its discharge tube directly at the monster. The outer door was then opened, sending a puff of air into the face of the foe and causing it to sway visibly on the viewing screen, among the frigid, motionless scenery. Almost simultaneously, Kuwamoto turned on the compressed nitrogen.

On the infra-red viewing screen, the stream of gas looked like a solid black beam shooting out of their space-vessel. It spread out swiftly into a black cloud that struck the monster and literally blew the beast to nothingness. To the Neptunians, who must have been watching the attack, the sudden vanishing of the beast must have appeared very mysterious indeed. The pressure of the nitrogen in the terrestrial cylinder was to them an almost inconceivable phenomenon; none but their trained mathematical physicists could comprehend it.

For an hour or two, they waited and watched, anxious to see if the vortex of gases had done any harm to the Neptunian child, even though the bulk of the space vessel had protected it from the greatest pressure. In that time, no serious change was visible, and the men, exhausted by the strenuous events of the last hours, slept. Upon awakening, they were gratified to see in the visual transformer that Elzar had reached the little one's side; and that both of them seemed safe.

The men made a quick decision to return to the earth. They had gathered enough data and had enough excitement for one trip; whereas the difference in the perception of the passage of time between them and the Neptunians made it out of question for them to wait for anything else. The most trivial act of a Neptunian required too great a portion of an earth-man's lifetime.

They expected at the beginning of their return journey, that they would soon hear from Elzar. On the third day they began to get the purport of his message, which occupied the entire flight homeward.

"My friends from the Earth. I thank you for saving my child. How you destroyed the animal, I cannot understand. It vanished instantaneously. When I looked toward the place you recently occupied, you were no longer there. Often have I warned my little one of the awful dangers from the sea, but I believe it is characteristic of the young of all worlds that they learn by experience rather than by admonition. You averted a tragedy that would have wrecked the life of Elzar. How I can show you the gratitude I feel, I do not know. Perhaps the time will come; but I must act quickly, for any delay on my part might cover the remaining years of your lives. My dream is interplanetary television, and to that I shall devote the remaining years of my life. Never shall I be content until I see the cities and men of your world. Again I thank you and may you live to realize the gratitude of Elzar of Neptune."

Kuwamoto sighed.

"It wouldn't take much," he said, "to go over there some day and clean up that nest of ugly beasts."

THE END.

What Do You Know?

READERS of AMAZING STORIES have frequently commented upon the fact that there is more actual knowledge to be gained through reading its pages than from many a textbook. Moreover, most of the stories are written in a popular vein, making it possible for anyone to grasp important facts.

The questions which we give below are all answered on the pages as listed at the end of the questions. Please see if you can answer the questions without looking for the answer, and see how well you check up on your general knowledge of science.

1. What are the smallest known and most abundant fossils? (See page 775.)
2. Of what is the ocean's bed largely composed? (See page 776.)
3. What affects the Peruvian and West Coast climate so that it is nearly rainless? (See page 776.)
4. What is the origin, course and nature of the Humboldt current? (See page 776.)
5. What other current acts against the above? (See page 776.)
6. What marine growths seem a connecting link between plants and animals? (See page 787.)
7. What are three personal milestones in the development of radio? (See page 791.)
8. What is a plausible reason for not leaving a space traversing sphere? (See page 792.)
9. What is the formula for the Lorentz-FitzGerald contraction? What result does it give for a body moving with the velocity of light? (See page 793.)
10. What part of the human system controls our equilibrium? (See page 794.)
11. What qualities would be looked for to indicate that some colloid was protoplasm? (See page 803.)
12. Is a figure, such as a square, bounded by lines? (See page 809.)
13. What were the results obtained by Mendel in growing peas? (See page 825.)

By HARL VINCENT

Author of: "Barton's Island," "The Seventh Generation," etc.

The COLLOIDAL NEMESIS

Illustrated by MOREY

SYNTHETIC life is not a new subject, but it will have many possibilities for fiction as long as scientists continue their experiments and authors still possess a fertile imagination. Being primarily interested in electricity, Mr. Vincent tries a ray process to activate a colloid and convert it into protoplasm. We have found a good many uses for electricity already, but we do not know what it is nor all the things it can do. It is not beyond the pale of possibility that the author's method might some time become a practical one. This is a highly plausible story of high merit.

LATE in the summer of 1953, the eighth bloody year of the War of Extermination, there sat in Minneapolis a conference of the representatives of the Western Alliance. It seemed to the members present that civilization was doomed; that no power of God or man could stem the relentless tide that had already taken toll of nearly seven-tenths of the population of the globe. In the Americas great desolate wastes now marked the formerly fertile and prosperous regions for fully five hundred miles inland from both Eastern and Western coasts. Mexico was entirely depopulated, excepting for roving bands of survivors who rapidly reverted to almost complete savagery. The great nations of South America were in well-nigh as hopeless condition. In Europe there remained but a small area of France and Germany with sections of what had once been Poland and Czecho-Slovakia. Japan was gone; the British Isles, the Scandinavian Peninsula, Spain, Italy and most of the western portion of Africa as well as the entire continent of Australia were but little more than memories.

Ruthless and terrible as had been the warfare of the Asiatics, the reprisals of the Western Alliance had been equally successful, so that the loss in man power suffered by the enemy was fully as great as that of the Allies. But their vast territories had sustained far less of encroachment and damage and the losses in non-combatants amounted to but forty per cent of those of the countries of the Western Alliance. But famine and pestilence were now to be reckoned with, and it was quite evident that a few more years of such a war would spell the virtual annihilation of the human race.

Secretary Johns of the United States War Department was the speaker of the moment.

"Gentlemen," he said, "our negotiations with the enemy have failed for the third time. They are insane with blood-lust and are bent on continuing the war to its bitter end, full well knowing that their own doom will be thereby sealed as effectively as will that of the Allies. Much as we desire peace, much as we are willing to concede in the way of territory and tribute, they are still not satisfied. They must kill—kill and destroy, until the insanity leaves them. And it seems that it never will. To save the world from ultimate disaster of terrifying completeness, we are faced by the necessity of contriving a new method of attack or a powerful new engine of destruction; a means of so thoroughly defeating the enemy in a number of major offensives as to bring them to their senses. But who has such a plan, or who can devise such an engine of destruction?"

He paused and the assembled diplomats and strategists stared moodily at the speaker. Who was there indeed who could accomplish the impossible?

There was a stir at the door of the council chamber. The attendants were arguing with a disheveled young man who insisted upon being admitted to the presence of the great men within. Every neck was craned in the direction of the disturbance. The chairman made vigorous use of his gavel and Secretary Johns strolled to the entrance to ascertain the cause of the commotion. There was a buzz of excited comment from the spectators when he returned almost at once with the ruffled citizen who had demanded admittance.

"This is somewhat out of order," Johns announced when he had led the young man to the rostrum and once more faced his audience, "but we are in desperate straits, and this man, Homer Larkin, claims he has discovered a means of winning the war. I believe we should give him a hearing."

There was a moment of incredulous silence and then, notwithstanding a few dissenting voices, there came a chorus of approval. The tired and discouraged delegates were ready to welcome aid from almost any source. And

¶ *They observed that what he said was true, for the Thing was now so large as to nearly fill the bowl from which, strangely, the water had now vanished*

so it happened that Homer Larkin was permitted to make his little speech in the temporary meeting place, the hall in the mid-Western city, which had so recently been designated as the sixth capital of the United States since the destruction of Washington early in the war. And the enemy lines were now advanced to the banks of the Mississippi at one point.

"I am an experimenter," spoke Homer Larkin, "an inventor, if you please. In my researches I have stumbled on an astounding thing, and I believe it presents vast possibilities in the way of being used successfully against the common enemy. My purpose in coming here is to request that you appoint a committee to visit my laboratory and permit me to explain my ideas to them. It is my firm belief that such a committee will report favorably and that the Allies will be able to put an end to this terrible war by means of the agency I have to offer."

"What is the nature of your invention?" asked a dozen voices.

"I had rather leave that to the committee," calmly replied the amazing young man. "Much time will be saved thereby."

Angry voices greeted this sally, but, with order eventually restored, Secretary Johns once more took the floor.

"Gentlemen," he said, "I believe that Mr. Larkin is right. A day of useless argument will result from an attempt on his part to explain an invention that is of sufficient value for our needs. If the proposal is not of sufficient value, there will be merely the wasted time of three of our number, and I for one am willing to act as a member of this committee."

The matter was put to a vote and, after considerable bickering, there were chosen to accompany the young man Secretary Johns, Herr Franz Boldt of the German Intelligence Department, and Sir Walter Hannaway of the British Air Ministry.

AFTER a short trip in a fast plane, the four men arrived at a secluded spot near the south shore of Rainy Lake, where Larkin's laboratory sprawled unostentatiously among the trees in a strip of second-growth forest. The young inventor produced a key and admitted his three prominent visitors to the ground floor of the workshop in which he had spent most of his time during the past three years. An empty sleeve and a decided limp told of valiant service and of the reason the young man was no longer in the military or air forces.

The entire ground floor was taken up by the laboratory and the visitors were astonished at the wealth of equipment it contained. Two walls were lined with rows of shelves on which reposed innumerable bottles, chemical retorts, stills and what not. The rest of the large, single room was cluttered with mechanisms, furnaces, and coops in which were imprisoned a weird assortment of living creatures.

"Here, gentlemen," said Homer Larkin without preamble, "here is the marvel. See it with your own eyes—then I'll tell you all about it."

He led them to a globular vessel that reposed on one of the work benches, which vessel was partly filled with a clear liquid.

"Water," explained Homer, "fresh water from the lake. But stagnant or even salt water would do as well. Watch!"

He snapped a switch on a nearby instrument which resembled an X-ray apparatus, and the bowl was illuminated by an eerie radiance that imparted to the liquid the appearance of swirling gases of many colors. The committee, observing that the transformation was the result of a hazy ray that was directed on the bowl from the humming mechanism, watched expectantly. The swirling gases seemed to curl swifter and swifter, soon resolving themselves into a muddy ball that rotated rapidly in suspension. The surrounding liquid had turned a sickly pink and a reeking odor arose from the bowl.

Then a remarkable thing happened, for the liquid suddenly became crystal clear and the muddy ball settled to the bottom of the bowl, flattening itself to a disc of probably four inches in diameter. The inventor turned a dial on the face of his instrument and the disc moved. It humped up in the center and started to wriggle as if alive. Then it changed shape with considerable rapidity, alternately stretching to a slender thing of eel-like proportions, then snapping to less than half its original length and swelling up like a toy balloon. As they watched, it more than doubled in size and its contortions increased in rapidity and violence. It was alive! And it was rejoicing in the fact!

"Heavens!" exclaimed Herr Boldt with a shudder of disgust.

Homer dropped a fragment of raw meat into the water and the horrid creature flattened once more to a thin disc, wrapping itself around the morsel and bumping about in its narrow confines as if in an orgy of gluttonous satisfaction. Then it resumed its normal shape and the meat was gone—dissolved and assimilated by the uncanny thing. Still it grew and grew and soon its bulbous, palpitating body nearly filled the container. It flattened itself against the glass and, in the glare of the eerie light, they could see that it held fast by means of thousands of tiny vacuum cups that formed between its ugly mass and the hard surface.

"What do you think of it?" demanded Homer.

"Suffering cats!" exclaimed Johns, "what on earth is it?"

"Synthetic life."

"Synthetic life? Produced by merely directing the ray from your apparatus into water?" asked the Englishman.

"Exactly. And, you will observe, the Thing continues to grow as long as the ray is in operation."

They observed that what he said was true, for the Thing was now so large as to nearly fill the bowl from which, strangely, the water had now vanished. Sir Walter sat weakly on the nearest chair, feeling suddenly weak and faint.

"Ach!" grunted the German, "it is not nice to see. And with such as this you expect to conquer the enemy?"

"I do. But come—this is sufficient for a demonstration. I shall explain." He snapped the switch of the machine from which the strange energy emanated and the Thing subsided.

They proceeded to a sitting room on the floor above and Homer Larkin went on with his story.

"Gentlemen," he said, "our world is threatened with a terrible fate, as you all know. If steps are not taken to end the awful slaughter of this war, there will remain nothing of our civilization but a few snarling, fighting maniacs who will eventually perish as had the rest of the human race. We must take those steps, for our civilization, with all its faults, is worth saving. And in this artificial life you saw downstairs we have the means

of ending the War of Extermination. By this means we can decisively overcome the enemy, and it is only in this manner that we shall ever be able to bring them to the realization that an immediate cessation of hostilities is imperative."

The three members of the committee exchanged meaning glances. Homer Larkin had analyzed the situation in almost exactly the same words as those used by Secretary Johns in the morning. But he offered a solution as well.

"What you saw in the bowl," he continued, "was merely a mass of protoplasm, a dense colloidal liquid, artificially produced, that possesses those qualities we consider as essential to and indicative of life. These qualities are the power of spontaneous mass motion and irritability, both of which are possessed to a marked degree by my creation. The Thing has the additional quality of growth at a tremendous rate. Had I not turned off the ray, it should have grown to the size of an elephant while we are talking. But the ray, which I need not describe technically save that it is vibratory in nature and is easily produced by a simple modification of the Coolidge tube, has absolute control of the creation and continued existence of this form of life."

Sir Walter interrupted, "How on earth is it produced though? From water?"

"Yes. The sea is the mother of all life. What caused the earliest forms of life to emerge therefrom, we do not know. I do not know now why the special energy of the tube reassembles the atoms or electrons in water to form living matter, but I know that it does so and that is sufficient. The utility of the discovery in the present emergency is what interests us, and I believe there can be no doubt of that. What I propose is that every available factory in the allied countries be put to work manufacturing these tubes and the necessary apparatus for their activation. The tubes, hundreds of thousands of them, should be installed in the torpedo-bodied planes that are capable of flying into the rarest atmosphere. When sufficient of these are prepared, we can make a concerted drive on all fronts, keeping the planes at an altitude that will insure their invisibility from below. It will then be possible to lay a barrage of the rays into a river or a pond or a lake and to advance the barrage in the direction of the enemy, keeping them in contact with the advancing masses of protoplasm against which nothing can stand or prevail. The living matter cannot be destroyed, and its appetite is voracious. It cannot fight, yet neither can it be fought. It will merely provide an advancing horror that will cover everything in its path with a vast depth of quivering jelly which absorbs and consumes any plant or animal life with which it may come in contact. The enemy will be driven to escape in their planes or, eventually, into the ocean. And, when the rays are turned off, the colloidal mass will revert to its original state—it will replenish the streams from which it has been created and will throw off to the atmosphere all oxygen and other components from which it has sprung and on which it existed. That is all."

"Heavens alive!" gasped Herr Boldt, "the boy has done it! The world is saved!"

Secretary Johns and Sir Walter were wringing the hands of Homer Larkin in an entirely undignified but sincere manner. And that night the radio carried code messages to all of the allied nations that brought the first glimmerings of hope that had come to their war-weary peoples in eight long years.

FOUR months later the salient in the enemy lines, which had first reached the Mississippi near East St. Louis, was extended to such an area that the east banks of the river were lined with trenches and fortifications from Cairo to La Crosse. And with the close approach to Minneapolis of the fighting, the capital had been moved once more, this time to Sioux Falls, South Dakota. Along the west banks of the Mississippi there stretched the defenses of the Americans, long lines of bomb-proof shelters and the circular huts that housed the generators of the neutralizing walls, that wall of vibrations which was projected to a height of five miles, effectually preventing the low-flying fighting planes of the enemy from crossing into American territory and likewise stopping their death rays at the border. It was the invention of the neutralizing wall that had prolonged the war and postponed the victory which had at first seemed so imminent for the Asiatics. With its advent, the war was brought back from the air to the earth, and it was necessary to resort to the old style trench warfare and return to the use of the bayonet, explosives, and gases of the vintage of the war of 1914-1918. But in the older method of fighting the superior numbers of the Asiatics still gave them a tremendous advantage, so that there was no question of doubt as to the final outcome. And the old style warfare, while much slower than the modern way of spreading destruction from the air by means of the death ray, was far less merciful.

It was mid-December and there had been three weeks of bitterly cold weather in Minnesota and upper Wisconsin. But the Asiatics were as accustomed to the cold as were the Americans, so they were not greatly handicapped in their occasional raids and sorties. But a mantle of snow covered all of the northern portion of the lines, thus making it necessary to bring supplies by air from the bases in the eastern part of the devastated country. And the snow was a godsend to the Americans, as it later developed.

The morning of December 19th dawned crisp and clear in the vicinity of Moline, Illinois, where the winter headquarters of the Asiatic forces were established. General Novotny and his staff were quartered in one of the few mansions still left standing in the town, and their living was riotous and luxurious. But then they were at a considerable distance from the great Father of Waters; and, besides, they had never heard of the Larkin ray.

The General was awakened by one of his aides at an ungodly hour. It was not yet nine o'clock and the General had a headache. Ordinarily the aide would have no more dared approach Novotny's chambers at this hour of the morning than he would have dared to strike the cantankerous commander with his gauntlet. But this morning he had momentous news—unbelievable reports were coming in from the division commanders all along the eastern line.

"General," he responded to the cursing inquiry of his superior, "there are alarming reports from all along the front. It seems that the river is overflowing its banks and our strongholds are being inundated. There is some confusion in the reports, certain divisions averring that they are being forced from their positions by an avalanche of glue that is pouring from the river. Others report strange aquatic monsters as attacking them. But the line is broken and our forces are in disordered retreat. It is necessary that we evacuate Moline at once."

And in the upper atmosphere there circled, unbeknown

¶ *The heavy artillery and the field guns were brought into action, and a terrible rain of bursting shells met the front wall of protoplasm that was engulfing in its progress men, horses, provisions, fortifications, everything*

to the enemy, thousands of the torpedo-bodied planes, from which there poured earthward the barrage of Larkin rays, their faint haze not visible in the brilliant sunshine. Slowly there crept from the east shore of the Mississippi a monstrous mass of protoplasm that squirmed and crawled and spread its gluttonous bulk over everything in the path determined by the advancing rays of the fleet above. With its rate of growth greatly accelerated by the taking up of water from the heavy snows that covered the states of Wisconsin, Illinois, Michigan and Ohio, the living colloid advanced at a rapidly increasing pace until it was traveling eastward at the rate of nearly twenty miles an hour. This was even more than the defenders had anticipated in their most optimistic moods, and there was jubilation in the headquarters of the War Department at Sioux Falls.

THE panic-stricken Asiatics endeavored to escape the frightful enemy that had come upon them so unexpectedly. In the front line trenches there was no escape and thousands upon thousands of their number perished miserably in the clammy stickiness of the protoplasm that poured into their dugouts and absorbed into itself the frantically struggling humanity. Bombing planes came up from the rear and dropped their loads of high explosive into the advancing waves of muddy brown awfulness without result. True, great craters were blown in the jelly by the explosions, but these filled in immediately, and the progress of the mass was in nowise checked. Then the heavy artillery and field guns were brought into action, and a terrible rain of bursting shells met the front wall of protoplasm that was engulfing in its progress men, horses, provisions, fortifications, everything. It seemed that nothing could exist under that awful rain of

fire, but the resulting agitation of the mass seemed only to stir it to still greater activity. On and on it came, and the soldiers fled as best they could, their communication lines disrupted and their ranks broken into wild mobs that fought and scrambled for fancied safety, all semblance of discipline being abandoned.

Then came the fighting planes of the Americans, and they flew low over the retreating hordes, harassing them with deadly bursts of machine gun fire and with high-explosive and gas bombs that took terrible toll of life. The infantry was hopelessly outdistanced by the spreading death of Larkin's devising, and the only escape was by means of automobiles, planes and the railroads. Even the trucks of the Asiatics had difficulty in making their way eastward, many of them being overtaken as they lumbered over the once smooth but now torn and broken highways.

In less than thirty-six hours the Central States were cleared of the enemy from the Great Lakes to the Ohio River, and then the barrage of Larkin rays shifted south, crossing the Ohio and driving the shattered remains of the enemy forces from Kentucky, eastern Tennessee, Georgia and Florida. Then they swung northward once more to rid the Middle Atlantic, Eastern and New England States of the demoralized Asiatics.

(*Continued on page* 827)

The TIME DEFLECTOR

By Edward L. Rementer

Author of "The Space Bender"

THE satirical touch which pervades this story reminds us forcibly of Dean Swift, of "Gulliver's Travels" fame. What would happen if we devoted our energies exclusively to the mental progress of future generations—if we neglected the Mendelian Laws entirely? In this vivid picture of the future the author gives us a very likely vision of what the world might be like 5,000 years hence—scientifically and mechanically and as a civilization. And while you will enjoy it consistently throughout your reading, you will find, when you have finished, that it is decidedly thought-provoking, as well as entertaining.

Illustrated by BRIGGS

Prologue

TO those interested in such matters, the name of Professor Robert A. Melville will be familiar as that of the man who caused a furor in the scientific world some years ago by asserting he had invented some preposterous machine by means of which one could journey into the future.

Indeed, it is more than likely the old scientist will be remembered by the general reader, for so acrimonious and violent did the dispute become, that it could not be confined to the august halls of science, but overflowed into the prosaic workaday world.

The whole affair was truly lamentable, as it more or less besmirched the character of Professor Melville, a venerable and honored citizen, whose keen, logical mind had brought forth a number of remarkable inventions which greatly benefited many of his fellow men.

Of even more importance than this, however (for, after all, the Professor's reputation was a personal matter), was the fact that it led to the withdrawal of one of the strongest intellects of modern times from the active pursuit of science, and so deprived the world of the services of one who could have done much to lighten the burdens of life.

Professor Melville was one of those individuals who are unable to stand ridicule. So long as criticism emanated from his brother scientists, all was well. It did not matter. It was a family affair, so to speak, and, while the warfare might be both harsh and cruel, it would be conducted along the recognized lines of debate, within which the Professor was amply able to hold his own.

To the scientist, personalities ordinarily are forbidden. It is not a question of proving Smith a charlatan, or Brown a fraud. The matter at stake is whether the invention of Smith will work, or the hypothesis of Brown will stand the test of experimental verification. Hence, no matter what the result, except in very rare instances, there are no bitter heartburnings; no lasting rancors. The austere goddess, Athena, can number no petty spirits among the devotees at her sacred altar.

In an ill advised moment, an interview was granted to some cub reporter of moron intelligence, who represented one of the most blatant of yellow journals. To such an individual, the elaborate, intricate, carefully reasoned arguments of the Professor were utterly incomprehensible. The fellow could see nothing except a chance for "copy"; an opportunity to make fun of a mentality beyond his own, and he indulged his supposedly humorous proclivities to their full extent.

The article published by *The Daily Scream* gave no space whatever to Melville's view of the scientific feasibility of moving backward or forward in time, but seized upon the fanciful opinion that, by doing the former, one could regain a lost youth. Professor Melville was cartooned as a kind of amiable satyr in search of the fountain of youth, accompanied by a bevy of young girls in various stages of dishabille.

Even at this point matters could have been adjusted, if it had not been for a yet further unfortunate combination of circumstances relating to the psychological temperament of the inventor, and the untactful remark of Dr. Holden concerning the incident of the lost element, "Tempium."

Of course, the ordinary man of the streets would have laughed off the newspaper cartoon as a joke, and promptly forgotten all about it. Even if he had not taken this attitude, but had desired redress, the average person would have sought it in the courts of law, and brought suit for libel against the offending publication.

PROFESSOR MELVILLE, with a meticulosity possible only to a mind of his special type, regarded the "press attack," not as a slur on his personal integrity, but as a deliberate insult to the scientific fraternity at large.

He brought up the matter at a meeting of "The College of Science," and requested that organization of savants to enter suit against *The Daily Scream* in the name of the association.

¶ *A blinding glare enveloped me, while the roar of a thousand Niagaras throbbed in my ears. Suddenly the earth seemed to fall from beneath my feet.*

It can be understood that "The College of Science" could not do this. The College was not legally implicated, and (even if it had been) such action would have placed it in a position of ridiculous bickering, improper for so dignified a body.

His resolution was overwhelmingly defeated by written ballot, only three members going on record as in favor of it. Among these was old Professor Jenkins, who had the unenviable distinction of never having voted on the popular side during a public career of over fifty years.

As if Professor Melville were not already sufficiently incensed, it seemed that Dr. Holden must add fuel to the flames by making the caustic remark that, "in his opinion, it would be more to the point if his esteemed friend, instead of trying to involve the association in an absurd controversy over nothing, would produce his remarkable element, 'tempium,' and so refute his detractors and establish the truth of his strange assertions at one stroke, by going into the future, as he stated this new element gave him the power to do. Furthermore," he so far forgot himself as to sarcastically conclude, "he would very humbly and respectfully suggest that—once having gone into the future—it would be an excellent thing for all concerned if the learned Professor would stay there, and thus enable The College to devote its attention to matters of real scientific value."

The Chairman considered this to be entirely too personal to countenance. He thunderously called Dr. Holden to order and severely reprimanded him for his unscientific attitude. He further explained that, "unfortunately, Professor Melville was unable to produce any of the precious 'tempium' as his entire stock accidentally had been destroyed, and he" (The Chairman) "was informed it would take over fifteen years to make a new supply, due to the slowness of a certain radioactive process essential to its manufacture."

Professor Melville was not pacified. Feeling that he had been publicly slandered and belittled, he offered his resignation from "The College of Science" and left the meeting in high dudgeon. Shortly after this, he retired from scientific life, and devoted the remainder of his years to growing cucumbers on his farm at "Wild Oaks."

So the turmoil ceased and the matter was forgotten. It was only natural for most people to lose interest in something of which they possessed no real understanding. To tell the truth, it is doubtful if the public had any knowledge of the facts at all beyond the garbled newspaper stories, and a popular song entitled, "Back to My Childhood Days," which, for a time, amused the rabble.

On Publishing Dr. Melville's Papers

THROUGH the courtesy of Mr. Marmaduke Jones, the lifelong friend of Professor Melville and the administrator of his estate upon the event of the scientist's death last year, it has been made possible to present a full and detailed account of the affair, taken from the written statements of the participants in the adventure—Professor Melville, himself, and one of his friends, Mr. John Wooland.

Mr. Jones feels it his duty to publish these papers which have come into his possession as administrator, because, in his opinion, they contain matter of inestimable scientific value to the world, and because he desires, so far as it is in his power, to vindicate the reputation of the deceased.

Mr. Jones is further led to this course by the wishes of the Professor's daughter, Nova, who believes her father to have been grossly misrepresented and ill-used, and wishes *his* side in the controversy to be made public.

An additional reason that influences her is that, since both she and John Woodland are now living in another part of the country, occupied in an entirely different line of work, it is unlikely any undesirable publicity will ensue, as, no doubt, their neighbors and acquaintances will ascribe the similarity of names to mere chance.

Accordingly, the complete history of the once famous "Melville Case" is given for the consideration of the public. It is really difficult to believe the events recorded actually happened, but the skeptical are reminded that the persons who testify to their truth are responsible people who would seem to be above deceit, and whose education and general training apparently preclude erroneous observation of scientific fact.

Moreover, it is well to be extremely cautious in flatly offering the dictum of what is possible and of what is not. Our knowledge grows by leaps and bounds. A discovery here; an invention there; devoted men laboring in a thousand obscure laboratories and lo!—the wonder is accomplished; the marvel is consummated, and the dream of the impracticable enthusiast of yesterday becomes concrete reality in the vast commercial enterprise of tomorrow!

The citizen of a hundred years ago, who seriously had dared to predict the astounding achievements of the present era, would have been thought a madman and would have spent the rest of his days behind strong iron bars.

The radio that—without visible means of accomplishment—bears the very tones of the human voice across thousands of miles of stormy ocean to the homes and firesides of an alien land; the phonograph that actually overcomes death itself and enables us to immortalize the glorious voices of singers in all the living beauty of their mellow richness, while their poor flesh lies mouldering in the grave; the motion picture that stays grim time in its flight and makes it possible for us to see an egg hatch, a flower grow—to watch Mother Nature at her very work; the submarine; the airplane . . . but the list is legion and, greatest wonder of all, is the product of man who, from a shivering, defenseless pigmy in mortal fear for his life among the fearful denizens of the primeval jungle, by the sheer spark of intellect, has risen to be lord and master of the whole earth!

With these facts in mind, let us beware of a too hasty judgment in this matter of Professor Melville and his "Time Deflector." In the first place, the question is not one of possibility, but of fact. We, the jury, are not to determine if this thing *could* happen; we are to determine if it *did* happen.

If we handicap our decision by prejudice, by an *a priori* assumption of the bounds of possibility as conceived by the limits of our comprehension, we cannot do justice to a man whose scientific ability was so vastly greater than that of the untrained layman.

With the superlative arrogance of ignorance, the boor, the yokel does just this, and measures the infinite universe with the little foot rule of his own poor mind, but he is and remains—the boor; the yokel.

Let us who, while we may not be geniuses, nevertheless are rational, educated beings, avoid this error. Let us keep open minds, and form our opinions solely on the

basis of the evidence submitted for our consideration.

Professor Melville's Statement

SINCE civilization began, the mystery of time has enthralled mankind. All sorts and conditions of men; the king on his royal throne; the pauper in his squalid hovel; the ascetic in his lonely cell; the libertine in his vilest revels; all alike have speculated on the nature of this relentless measure of existence, from whose void all things came, and into whose darkness all things go.

Real understanding of time is impossible to the human mind. How can one conceive of that which has neither beginning nor end? No matter how far we probe into the dim past, there is always a "time" before; no matter how far we peer into the misty future, there will always be a "time" after. If we trace the origin of the universe back to the primordial atom, the question arises of what was before and, though we visualize Ragnarok and the end of the world; the query yet remains of what comes after. Always is our cry unanswered; never is the door unlocked.

To solve this problem; to lift the veil; to know the inmost secret; was my life work. True, I gave my attention to other things, practical matters of everyday life—for one must live—and, in my spare moments, devised a number of contrivances which the world considered of commercial value and for which I received my share of yellow gold, but all this was trivial, of no real importance. Ever the unknown road of the great quest stretched before me; always the lure of the ultimate secret beckoned me on.

In some cases, an obsession like this would have led to madness. At times, from much midnight brooding, and disappointment from entire lack of success, I trembled on the brink. Fortunately, I come of a stock in which the practical has always dominated the visionary, and my centuries of good inheritance saved me.

I realized that by dreaming I could accomplish nothing. If the mystery of time were to be solved at all, the solution lay in physical science, which has raised man to his present high estate, and not in fruitless metaphysics, which has ever been a will-o'-the wisp and has led nowhere.

So I entered the field of scientific research. I devoted my time to the study of physics and chemistry, as the two departments of knowledge most likely to yield results in the particular sphere of my endeavors.

In the course of my investigations, I worked for a time on certain difficulties encountered by the motion picture industry. Incidentally, I perfected a method of projection, and sold the patent to the Great Northern Film Company for a large sum.

It was here, in the motion picture studio, that I worked out what I believed to be the answer to the age long question of the meaning of time. The explanation—if explanation it could be called—was a paradox. It was nothing more nor less than the amazing conclusion that time did not exist at all!

The reader must understand I mean that time had no real, absólute value. It is only too evident it is a vital factor in our lives, as we live them. It would be somewhat difficult (not to say dangerous) to attempt to convince some one who had just missed a train there was no such thing as time. I never tried it.

TO return to serious argument. What I mean is that, while time is a part of our lives, it is exactly that—and nothing more. Separated from the mind which conceives it, and lives it, time has no reality. It is simply a limit to the scope of our senses; a boundary to the extent of our being. A simple illustration may make this clear.

Suppose we print a black square on a sheet of white paper. The limits of the square will be the distance to which the black extends. We see these limits as *four lines,* hemming in the square. A child always draws such figures by actually making the outlines. Yet—the lines do not exist. The square ceases where the black ends, without any inclosing boundary whatever. The lines have no being, except in the mind conceiving them.

In the same way, I felt time was a limit, a boundary apparently inclosing our lives, which had no more reality than the outlines seemingly inclosing a printed geometrical figure.

The difficulty is that, being finite ourselves, we never have been able to see time from any viewpoint other than the finite. We have always been caged within the boundaries of our own existence. Millions of people have gone outside the limits of their present existence, but by doing so, they have encountered what we know as death. While this may permit of existence in another form, it definitely ends this life, as it does exactly what we have under consideration—takes us outside the limits of our existence, and thus finishes that existence.

It was the good old "movie" which showed me the way. Here was a miniature world, to which I stood in the same relation as the absolute stood to my world. I was *outside* the "movie," and could view it unhampered by the conditions limiting its existence.

Consider a character in the play who, in the course of the story, is accused of a crime, tried and acquitted. Suppose that character to be endowed with consciousness. I do not mean the actor who played the part. Of course he is alive. I mean the actual picture character imprinted on the film, who has no existence apart from the film. In the pictures beginning the series, where he is first charged with the crime, this character would know nothing of the final acquittal. He must wait until the unwinding strip of film reaches that point in his life.

With me, however, all was different. I was not *in* the "movie." *I was not a part of the picture.* To me the unreeling of the film had no significance. Whenever I wished to do so, I could look at any of the series of pictures I chose. More than this, I could unwind a long film from the reel, lay it out on the table and see the entire life history of the picture characters at once!

Let us emphasize the point we are making. The characters in the film picture are confined to the sequence of pictures, while a person in possession of the film is not so limited. To him, the time element of the pictures does not exist. Relative to the picture people, he is the absolute; outside their time and beyond its furthest confines.

Deeply interested in this odd fantasy, I performed all kinds of queer "stunts." I cut sections from the film and produced pictures that at one bound covered entire years in the picture world. Sometimes I reversed the motion of the reel so that the picture men lived their lives backwards. Again, I superimposed pictures, one upon another, begetting a hodgepodge which contained the past, the present, and the future all at once!

One day I went just a step further. I cut the pictures apart and inserted people properly belonging to the be-

ginning of the story in the end and *vice versa,* with the result that the picture people *traveled in their time!*

Then it dawned upon me. The veil was lifted. I saw the truth. To some infinite power, *we* were but "picture men," having our little span of birth, life and death in a time-cycle that had no real being, apart from "our picture!"

Just as I could see and understand the entire picture story at once; just as its petty time-cycle had no meaning to me—so our poor time-cycle had no meaning to the Great Power which transcended us, the same as I transcended the picture people.

The meaning of all this was evident. The whole thing was relative. If the picture men could travel in their time because their time had no existence, apart from them, so we could travel in our time, if that time could be understood from a viewpoint, seen from which it had no existence, apart from us.

This was a pretty big "if." The picture men could not, of themselves, travel in their time, but could do so only by the interference of a being outside their world. As it was not possible for me to get outside the finite universe, the problem was to travel in time while yet a part of that universe.

Fantastic as it seemed, I did not think this was impossible. I reasoned that it must be either a matter of chance into what particular age a person was born, or that some special cause must determine the fact. Since science acknowledges no chance, the latter alternative appeared the more likely.

I set myself to discover the controlling factor. Night after night I pondered; day after day I meditated. Finally I was driven to consider the question of life itself.

A Monistic Theory

IT must not be supposed I was so daring, so egotistical as to hope to solve the ultimate secret of existence. No. I knew full well there was no answer to that riddle. As the great Persian, Omar, lamented, all attempts to penetrate beyond the inmost portal must ever result in the seeker coming out the same door by which he entered.

My inquiry into the nature of life was limited by an investigation of the subject from a finite viewpoint, and did not aspire to any understanding of a First Cause. The question of whether or not a Creator, a purposeful personality, controls the universe, did not affect my humble quest, which sought only to know the way in which the Almighty Power manifested Itself to mankind in the phenomenon we call life.

While my attitude toward the problem was deeply religious in the sense of a full realization of the awe and overpowering majesty of the Supreme Cause, it was not concerned with creed or sect and in no way entered the field of dogmatic theology.

It was evident that, for anything to exist, a certain amount of energy was required. Matter was possible only upon the assumption that some kind of force held together the atoms of which the substance was composed. Otherwise nothing would exist except individual, detached atoms.

Likewise life—the transformation of senseless, dumb matter into animate consciousness—was possible only by the action of some force which gave it being and kept it going. When this force ceased to act, death resulted, and the body returned to the lifeless state from which it sprang.

MY theory was essentially monistic. It referred all phenomena to one source of energy and regarded the conscious merely as the non-conscious raised to a higher power.

Of the nature of this fundamental energy I had no inkling; nor did I try to obtain any. I was content to work with the tools before me, without inquiring into the why and wherefore.

It will be understood that I did not lose sight of the law of the conservation of energy, which states the sum total of energy in the cosmos is constant. Far from overlooking this great truth, it formed the basis of my work and was the factor that enabled me to find a method of traveling in time.

If all things are derived from one store of energy, it follows that this universal energy is the only thing which has any real existence. Everything appreciated by our senses must be only a particular, individual manifestation of the one underlying power.

A crude illustration is a tub of water in which one splashes about and forms drops on the side of the tub. The drops come from the total supply of water and, when their little span is ended, return to it. So, perhaps, we come from, and return to, the central reservoir of force or energy, which is the sum total of all things.

It will be readily recognized that all this approached pretty closely to the ancient doctrine of pantheism. I could not help that. I sought a way to move about in time, and if this hypothesis gave me the means to accomplish my purpose, I did not care what one called it.

According to my theory, time had no reality, but was simply a limit imposed upon our individual existence. The age in which one lived was only an illusion. I might just as well have lived any time as in the present, since all time was purely imaginary.

Yet it was an indubitable fact that I (whatever my relation to the absolute) was a man of the present and not of some other century. The problem was to discover what made the various periods of time *seem* different.

To make a long matter short, and to present a very technical subject in a comprehensible way, after continuous and almost unending experiments, I found that our place in which we call time was determined by *the angle* our life force made with the central force from which it came.

To return to our tub of water analogy. The position of the drops on the side of the tub was purely a matter of the angle at which they were splashed off. Now our position in time was likewise dependent on the angle (in four dimensions, however) at which our life energy emanated from the primal force.

Now, just as the drops could be moved along the side of the tub to a different position by the action of gravity, of the wind or of other forces, so, perhaps, we could be moved in time by the exercise of the proper force.

Finally I discovered that force. It was a ray, of extremely rapid vibration, given off by a new element I previously had come across in the course of some other experiments. I had named this element "tempium." When this substance (the secret of which I retain) was subjected to a tremendous heat in the electric furnace, its atomic structure was so altered that, on being removed from the furnace, it emitted a ray that moved

objects about in time. If a direct ray was used, the direction was forward, to the future, while, if a reflected ray was employed, the movement was backward, to the past. The latter was restricted by certain conditions, of which more later.

A most curious incident attended my discovery of the magic property of the tempium ray. I accidentally allowed it to play directly upon my dog, Carlo, when, to my astonishment, the animal disappeared.

ALL subsequent efforts to find the creature proving fruitless, I gave up the search, and concluded I had disintegrated poor Carlo into his constituent elements. This caused me great regret, as I was very fond of the little fellow.

About a week afterwards, when idly playing with a *reflection* of the tempium ray, I was completely dumbfounded to see the lost canine suddenly materialize on the laboratory table, but, whereas, when he had disappeared, Carlo had been in the full strength of youth, he was now in the last stages of senile decay.

When my first amazement had somewhat abated, and I could think the matter over, the solution was quite evident. I had achieved my object. I had found a means of transporting a living creature into a future age!

The dog had been sent into the future, had lived there almost to the end of its allotted life span, and then, the reflected tempium ray happening to envelop it in that future age, he had been brought back to the present!

This gave me food for thought—and to spare! It clearly showed that time traveling was an experiment of the utmost danger, likely to be attended by the most dire consequences.

Consider the facts. The incident of the dog proved the measure of time in the present did not correspond to the length of the time traveler's stay in the future. Although the dog had been in the future but a week, according to our time, that week represented a period covering years in the time of the future. If a human being were to be projected into the future, the greatest care would have to be exercised to prevent him remaining there long enough to complete the term of his normal life. If he did this, the explorer would die in the future. If I were the explorer (since I should never return to the present), the experiment would be useless for scientific purposes. On the other hand, if an assistant so mysteriously vanished, I should run an excellent chance of being tried for murder.

To overcome this risk, I tried to find out the ratio of present time to future time, but was unable to reach any satisfactory conclusion. It seemed to vary for different things. A rabbit which I sent into the future, and kept there ten minutes of our time, returned only a month or so older, while a bird, on which I experimented, never returned at all. As I had no means of knowing what the rate of life speed would be for man, the reader can very well understand I hesitated to engage in so hazardous an undertaking.

I was able, however, to work out means by which the period or age in the future, to which the subject was to be transplanted, could be controlled. This involved a complicated mathematical formula which I shall not inflict upon the reader. The necessary symbols were inscribed on a dial similar to a radio dial. The positions of these symbols indicated the extent of the journey into the future. By exhaustive experiments, I satisfied myself that it was as safe—or as dangerous—to go ten thousand years into the future as it was to go one!

The invention was completed and ready for use, but I delayed. Upon one pretext or another I postponed the actual trial, telling myself that I could wait until later, when I should be more familiar with the infernal thing. In short—I was afraid. I dared not make the adventure myself and was equally unwilling to let anyone else try, provided I could find anyone who was brave enough (or fool enough) to agree to do so, which was extremely unlikely.

In this dilemma, the question of traveling into the past presented itself as a welcome relief from a situation that had become well nigh intolerable, since the "Time Deflector" (as I had named the outrageous contraption) had placed me in the position of Frankenstein and his monster. I had given my life to its completion and, in popular parlance, now I had it, I didn't know what to do with it.

So I fooled with the reflected tempium ray, which, as stated, possessed the power of sending objects into the past. The results, while quite logical, were somewhat unexpected. Naturally, I had thought it possible to move backwards in time with the same facility as forwards, but this was not the case.

Nothing could be sent into the past beyond a time that antedated its origin. When I tried to do this, the machine jammed and refused to function, although the subject was not harmed. This was a disappointment to me, as I had intended visiting any period of history I might select, to gain a first-hand knowledge of antiquity, but the fates ruled otherwise, and all my chagrin was of no avail.

THE failure of the time deflector satisfactorily to penetrate the past was not due to any fault in the machine. It was simply because the past was—the past. I was seventy years old. I could go back seventy years and live my life over—exactly as I had lived it as myself, Robert A. Melville—but not as another person viewing that life from the present. For instance, suppose I went back in time ten years. I should then be sixty years old and should pass through the various experiences I already had gone through at sixty years, but, while I was in the past, I could have no conception of the future to follow that past, as that future then would not have been experienced. To sum up, I could not enter the past and retain a knowledge of the present. When in the past, I inevitably must be (as I had been when I originally lived it) a creature in and of that past, and not a visitant from the future.

It occurred to me that I might take the time deflector with me into the past and, having gone back fifty years, move myself fifty years further into the past, which would be a hundred years in all. A little reflection, however, showed me that this was impossible.

For one thing, the time deflector had not been made fifty years ago, for which reason it would jam and refuse to go into the past at all. Another reason was that I, myself, had not been born a hundred years ago and could not reach a time prior to my own birth. The past could not be changed. It was the past. To intrude elements into it that really had not been there when it took place, would be to *change* the past, which was a feat beyond the power of man.

Doubtless the reader has come to the conclusion that I am either a madman or the prince of liars. I freely ad-

mit that, to a great many, my arguments must appear absurd. This matter of being able to explore an unlimited future, but not being able to do the same thing with the past, is a particularly knotty point to surmount. Yet the explanation is quite obvious.

In our consideration of the problem, we must bear in mind that we do not deal with absolute time (which does not exist), but only with finite time, which has a very real existence for finite beings. With this proviso, let us look into the question just a little further.

While the time deflector enabled one to seek out a future which had not come to pass and to live once more a past that had been, it could not make one enter a *past that had not been.* To illustrate:

Suppose I went into the future a hundred years, and, while there, took part in a battle and helped my side to win. Theoretically, this would be possible because it would not be changing the future, since it had not yet taken place. When, after a hundred years, that future became the present, events would come about exactly as they had transpired on my visit to the future a hundred years previously. I should enter that period of time, from a past hundred years before, take part in the battle and help my side to win, just as I had done when that future had been anticipated.

On the other hand, it would be utterly impossible for me to go into the past, take part in the Boer War, and, by the use of poison gas, drive the English from Africa —assuming that I wished to do so. When the Boer War was fought, such an event did not happen and, when the past was repeated, it could not be reproduced in a different way than it actually had taken place.

It was possible to penetrate the future because the future had not yet been and so could take place in an endless variety of ways. It was not possible to enter the past, *as a visitor from the present,* because the past had been, and could not be changed by the introduction of elements which had not formed a part of its original sequence of events.

Nova

I HAD now reached a point where I had to risk the experiment or abandon the time deflector as useless. To make the journey in person seemed unwise. I was an old man, unfitted to cope with unknown dangers in a future age of which I knew nothing. In addition to this, I was the only one who knew enough about the machine to be able to operate it in a manner to insure the safe return of the time traveler, provided he were not killed by the unknown inhabitants of the future.

On the other hand, whom could I get to brave such frightful and inconceivable perils? Certainly there were men in plenty who would undertake anything for money, but such characters would not possess the mentality to make their visit to the future of any real value to science. What I needed was a man of education and intelligence who would be willing to take this fearful risk in the interest of progress. But—where could such a man be found?

There is an old saying to the effect that "love will find a way." While the proverb is not meant in the sense in which I use it, nevertheless love did find the way. It was to Cupid that the experiment owed its success.

For some time my daughter, Nova, had been much interested in a young man named John Woodland. He had asked Nova to marry him and had been accepted, but, up to the present, I had not given my consent. I did not think that Nova would be happy with a man of his type.

It was not that there was anything really wrong with John Woodland. He came of a wealthy and exclusive family—the Woodlands of Cape Cod—but his place in life was not sufficiently established. He had done nothing. Having been born with the traditional silver spoon in his mouth, he had lacked all incentive to make a name for himself. Beyond being a first-class athlete and an extremely likable young fellow, the boy had in no way distinguished himself above the ordinary multitude.

Nova had met and been accustomed to talk with men who were leaders in their several branches of endeavor. The girl had lived in an atmosphere where achievement was the ordinary thing. I felt, however much Woodland might attract her in some way, that, in the long run, no man who had done nothing except live and be agreeable, could make a lasting appeal to her. When compared to the savants, doctors, explorers and others she had met, such a man would pall on her and the marriage would lead to unhappiness and misery.

As I liked John Woodland a great deal, since, in spite of his easy-going ways, the young dog was devilishly companionable, I frankly stated my position to him. He said that, if he had lived in the Middle Ages, he would have gone out and slaughtered a giant or two, but, as, unfortunately, he didn't, he saw nothing for it except to take up rum running on a large scale. With that brilliant jocosity, for the time being at least, the matter was dropped.

In the course of one of his frequent visits to our house, I chanced to mention my difficulty about the time deflector. To my complete amazement, this butterfly youth volunteered to make the journey into the future.

For science? No. Not by any means. For love! His object was to do something that would give him the standard of personal success he had hitherto lacked, so he would be able to overcome my objections to his marriage to Nova.

At first I would not entertain his proposition for a moment. The danger was entirely too great for me to allow him to chance it. He brushed all my arguments aside, pointing out that I had no right to refuse my consent to his marriage, because he had done nothing, and then, when he was ready to make good, to deny him the opportunity to do so.

The young scamp further represented that he was of age, was a college graduate and in every way fitted for the work. He also agreed to furnish a sworn statement to the effect that he embarked upon the adventure of his own accord, and released me from any responsibility in the event that harm befell him. Of course, such an agreement would be legally invalid, but it would be better to have it than not to have it, at any rate.

Nova took sides with Woodland. She contended he should be allowed to prove his worth. By the way she spoke, by her every action, I could see that I had judged her correctly. If she had admired Woodland before, now, after he had displayed such extraordinary heroism, she literally adored him.

With all these considerations in mind, I at last reluctantly approved the mad enterprise, and a day was set for the trial.

To say I was surprised would be to understate the truth. I was astounded—and unspeakably delighted. A cynical world believed romance was dead; that every-

thing was on a money basis, and that civilization was completely materialistic and prosaic.

Yet—it was not so. The spirit of chivalry survived. The divine spark that raised man above the beasts still burned. Here was this youth, this product of the idle rich, setting out alone on an adventure at which the mailed knights of old might well have hesitated; not for gold, but for love, the love of one woman. This lad, John Woodland, went bravely forth to win his lady fair, the same as his ancestors who fought with Richard the Lion-Hearted in the Holy Land or the Black Prince at Crécy had done before him.

I bowed my head in humility at the noble purpose which sustained him and thanked God that the soul of youth was not dead!

John Woodland's Statement

ON the day of the experiment, as I made my way to Professor Melville's laboratory, I was in a most unenviable frame of mind. Frankly, I was in a complete blue funk. I was so scared I had difficulty in keeping passers-by from recognizing my condition. Indeed, one old woman who carried a market basket filled with some vegetables that looked like small cabbages, having given me a most careful scrutiny, turned and followed me for nearly a block. At this point, apparently having satisfied her conscience that, whatever ailed me, I was quite harmless, she vented her feelings in a snort of entire disapproval and went on her way.

Considering the nature of my mission, it was small wonder I was afraid. Really, something would have been wrong with me if I weren't. I was no hero, but neither was I a coward. I was just an average man. The man who faces danger, without realizing the risk, lacks intelligence. While of only ordinary mentality, I did have enough sense to know what I was up against, and I was greatly frightened.

I dolefully reviewed matters, carefully weighing the pros and cons of the case, but, try as I would, I could reach no conclusion other than the cheerful one, that I had about one chance in a thousand of coming through alive.

I had often wondered what were the sensations of condemned criminals as they walked to the electric chair. I did not have to wonder any longer. I knew exactly how they felt.

When I had proposed this mad adventure, I had not fully realized its true enormity. The Professor's arguments, delivered in his best lecture-room style, reinforced by plenty of puzzling chemical symbols and mysterious algebraic formulæ, had seemed quite convincing. The old boy had sort of lulled me into a state of hypnotic acquiescence.

Besides—Nova had been present. That meant a great deal. The dear girl had expected me to come up to scratch; to put the thing across, and, darn it, what else could I do? I couldn't fall down before her!

It's all very well for some old codger, who never put his arm around a pretty flapper in his whole musty life, to scoff at love; to say a man's a fool to be influenced by a woman—but that's all bunk. The meanest little skunk in creation will try to make good before the girl he loves.

That's where the so-called "modern woman" shows a lamentable lack of knowledge of masculine psychology. A man doesn't want a woman to be brave, fearless and independent of his protecting strength. He wants a girl who leans on him, needs him and gives him a chance to play the hero before her admiring eyes. I venture to say, if the truth were known, that nine men out of ten prefer the shrinking, timid little mid-Victorian miss, with all her artificial innocence, to the unsexed tomboy, who scales the Matterhorn on a bet or shoots a lion or two as an appetizer for breakfast.

However, enough of this philosophical moralizing, which, if it is ever read, may get me "in Dutch" with divers of my very good lady friends. Suffice to state that the presence of Nova had been a large factor in inducing me to be the goat in this insane business.

For, to a greater or less degree, I had a most uncomfortable feeling I was somewhat of a goat. The fact that my father favored the proceedings did not change my opinion in the least. Dad was a pretty shrewd article and had managed to more than hold his own in the cutthroat environment of Wall Street, but I could see through his little game in this time deflector stunt. He didn't believe it would work.

That was it. Although pretending to think it a wonderful opportunity to do an heroic deed in the interest of science, in his dear old heart he thought the whole thing was a fake.

LIKE most practical business men, the pater was rather out of his depth when dealing with matters outside the limits of what is known as "common sense." The theoretical, the speculative, the abstract were too much for his hard-headed pragmatism. He simply could not grasp the idea of traveling in time as an actual possibility. I had not the slightest doubt he regarded Professor Melville as a lunatic, and had consented to my being the subject of the "experiment" only because he was quite certain the thing couldn't be done. His object was to test me; to see if I were made of the right stuff and had nerve enough to "carry on."

For my part, I did not feel so sure the experiment would fail. Although not an honor man, I had done well at college and had learned enough to show me how little I really knew.

I reflected on the peculiarity of old Doctor Snodgrass, who used to preface every lecture by stating that our savants and wise men had only scratched, as it were, the possibilities of scientific achievement and that anything, not a flat contradiction, was possible.

"Old Snoddy," as the boys affectionately used to call him behind his august back, was somewhat of a character. At a lecture, when he was holding forth on his favorite doctrine that almost anything was within the bounds of possibility, one of our self-styled wits asked him if it were possible to get any good liquor.

"Certainly," replied Snoddy, taking a partly filled flask from his hip pocket to prove his contention.

The chap who had asked the question, in no way taken aback, moved forward to get a drink.

"One moment," said Snoddy, holding out his arm to restrain him. "Possible for science, as represented by me, but not possible for ignorance, as represented by you," and drank off the contents of the bottle at one gulp.

Nevertheless, Doctor Snodgrass was a scientist of no mean capacity and, at the present crisis, I remembered his views with no great excess of joy.

Furthermore, Professor Melville was one man in a thousand—nay, in a million. He was a genius. His discoveries in the field of science had been momentous;

little short of epoch-making. Dad didn't know; he didn't read the scientific journals, but I did. The man was a marvel, a second Edison or a new Einstein. Professor Melville was no idle dreamer. He was intensely practical and generally managed to carry out his ideas to some concrete reality by means of which his "uncommon sense" had yielded him as much (if not more) good, hard cash, as the pater and his jolly crew had contrived to annex by the exercise of their boasted "common sense."

Who was I to say that a man like this, known throughout the civilized world for his giant mentality, was a crank or a nut? No, dash it! There was no such luck. I felt certain he really had invented some devilish thing that would interfere with the course of time and unlock the gates of the past or tear away the veil of the future. I was in for it and had to go on with it, like a lamb being led to the slaughter.

Finally I reached the laboratory. Slowly I climbed the broad marble steps. As one who knows he faces the grim angel of death, I paused and took a last look around. How ordinary, and yet—how good it all looked!

The sun was shining brightly. I noticed in particular that it made a little lake in the park opposite gleam like a thousand diamonds. Autos were passing; trucks were shrieking at wretched pedestrians; a man was distributing circulars; down the street a car conductor was having an argument with a taxi driver; children played; dogs barked; the usual, everyday affairs of the world went on.

As I rang the bell, I dismally thought of my condition. Here was I, a young man, healthy, well fixed financially, of good social standing, not unsuccessful in love—in fact, possessing everything generally considered to make life worth while—voluntarily leaving all these advantages to adventure into an environment unknown and unimaginable to mankind, where might lurk the most fearful hazards, such horrors as cause the drug addict to scream in loathsome terror—for what?

To gratify an old man's fancy; to cater to a morbid worship of science that had supplanted a decent religious faith in his fanatical mind; to prove myself *worthy* of a woman, when all the world, including the woman herself, held me to be worthy already, without proof; the same as any right-living, God-fearing man is worthy of any right-minded woman whom he loves and who has paid him the honor to love him in return.

Pshaw—to the devil with it! I was no knight-errant to risk my life to lay a possible crown of victory at some gentle damsel's feet. I was a sensible fellow of today, not a prince from a child's fairy tale.

I HAD half made up my mind to back out, when I happened to think of old Grandfather Woodland who had been killed at Gettysburg, trying to save a wounded comrade from the Confederate advance. I wondered what *he* would have done. H'm—not so good, backing out. There was Great Grandfather Woodland, too, a be-whiskered old gentleman, whose picture hung in the library. The Indians had burned him at the stake because he wouldn't tell where his comrades were hidden. Again—h'm.

Oh, well, that was in the long ago. They did that sort of thing then. Different breed, eh, those old scouts and the boys in blue and gray? How about your father, then? Didn't he sacrifice a hundred thousand dollars rather than break his word to a widow who was mixed up in some kind of railroad deal he was pulling off? I guess it was as hard for those fellows to do their bit as it is for you to do this. Different breed nothing! They were all Americans—just like you. Quit? Me? I should say not! I opened the door and went in.

When I entered the laboratory, the stage was set for the show. All they needed was the victim—I mean the hero—and here he was. In one corner, by the window, was the infernal machine that produced the tempium ray.

It was made of some brightly polished metal, like nickel, and resembled a small electric heater. Directly in front of it was a chair, the mere looks of which gave me the creeps. It was exactly like a dentist's chair, only it appeared to be made of porcelain. The stuff wasn't porcelain, however, but a glass composition invented by the Professor and made under his supervision by the well-known concern, Armstrong & Perkins, of Chicago. As explained by the Professor, its particular function was a most necessary one. It acted as an insulator for the tempium ray, thus protecting the rest of the room from being transplanted, bodily, into the future or past.

On the wall, exactly in back of the ray projector, was a switchboard containing a number of dials and levers, the whole lighted by a hooded electric bulb which shed a soft, mellow glow, that served to somewhat lessen the bizarre effect of the rest of the outfit.

The good Professor took me over to this control board and expounded, in detail, the workings of the little jinxes, in what was, no doubt, a highly scientific discourse. His lecture was entirely lost on me, however. I was so wrought up, I scarcely heard a word he said, which was just as well, since I hadn't brains enough to understand him anyway.

One thing I did gather from the old chap's speech. On the perfect adjustment of these harmless little dials depended my life. By them he arranged the number of years I was to go into the future and, also by them, he kept some sort of control over me while I was there, so that he could bring me back again to the present. The different cabalistic signs must be just so, or yours truly would never return to this wicked, bootlegging twentieth century in the good old U. S. A.

"To make the experiment of scientific value," concluded the Professor, "it is necessary to go far enough into the future to witness the complete development of the tendencies of today and yet not far enough to encounter the dangers of a possibly marked change in physical environment, such as another ice age, a lack of atmosphere or the like."

"Er—about how far into the future did you intend to have me go, Professor?" I humbly inquired, having what might be called a *personal* interest in the matter.

"Oh—five thousand years or so, I guess," he calmly replied. Just like that; not a bit excited, not nervous a bit. Just as if he had said, "You had better catch the 2:30 express." Oh, well—*he* wasn't going into the future. Why should *he* worry?

"Y-y-y-yes," I mumbled. "Five thousand years. Er-er—I say, Professor, isn't that a little—er—*far*, don't you think?"

"Oh, no, not at all," he answered, twisting a lever and twirling a couple of dials, so that some very pretty lights blinked a moment and then went out. "That's not so far in the future—when one considers eternity, my boy."

"Well," I acknowledged, "looked at from that viewpoint, I don't suppose it is, but—er—I mean—er—that is to say—wouldn't it be *safer* not to go quite so strong

at first?" I gave a silly bleat, intended to be a jocular laugh, and surreptitiously wiped the sweat from my brow.

"How far into the future did you wish to go, John?" he inquired, turning something on and off that made a noise like a radio when it's sick. "What was your idea?"

"My idea, Professor," I timidly replied as his piercing look bored into me. "Ah, yes, quite so. My idea—ha, ha, ha!"

He looked at me in some astonishment, evidently not understanding why I should laugh, which, to tell the truth, I didn't understand either, as surely it was no laughing matter.

"I asked you a question, John," Professor Melville stated. "How far into the future did you wish to go?"

"Well, Professor," I managed to get out, "if you leave it to me, I should say about five minutes—eh?"

He fairly glowered at me, so that I felt about two inches high. "Five minutes!" he shouted. "What possible scientific purpose could be served by traveling five minutes into the future? Have you lost your senses, or have you come here prepared to make a jest of the experiment?"

THE scientist seemed to reflect. At any rate, he calmed down, and said in a more rational manner, "Now keep up your courage, John, my boy, and trust me. I know what I'm about. We shall accomplish this thing —you and I, together—and be acclaimed by all the world as the greatest men who ever lived. Think of it, John," warming to his subject, "the future; time—the greatest enemy of mankind; conquered, and held subject to our power!"

While I cheerfully meditated on the delightful prospect of traveling five thousand years into the future (provided I did travel at all, and wasn't instantly killed by the rotten machine), Nova came into the room. So *she* was to be there, was she? That kind of bucked me up, and gave me a feeble resemblance to Sir Lancelot, or some other old guy, who was strong on doing his *devoir* for his *laydie faire.*

Nova didn't look so good. I don't mean she wasn't so attractive as usual, but she seemed worried. She looked haggard and drawn, as if she had passed a sleepless night. Maybe she'd been worrying about me. I know *I* had, anyway.

Professor Melville stepped over to the instrument board, and carefully adjusted the complicated mechanism. Finally he pressed a button which caused a tiny bulb to light up with a brilliant purple glow, and, at the same time, set some wheels or something in motion that made a low, purring sound. The works must have been in absolutely perfect alignment, as I could not detect even the suspicion of a vibration. At any rate, the machine was in apple pie order, and ready for the great test.

Having finished his inspection and adjustment of the apparatus, the inventor crossed over to me and, laying one hand on my shoulder in a fatherly manner, said:

"Well, John, everything is ready. If you are still of a mind to go through with it, there is nothing to do except to proceed."

"Oh, father, do you think we really had better do it?" interrupted Nova, clutching the Professor's arm in a nervous way. "Suppose——"

"Suppose what, my dear?" gently replied the old scientist, smiling at the distraught girl in a self-assured, benignant way that seemed to tap the reservoir of an unlimited confidence in his own prowess. "Surely you would not have our young friend withdraw at this ninth hour?"

"No—er—yes—er—that is——" She floundered, and paused in her anxious embarrassment, seeming to search for words. Suddenly, she appeared to make up her mind, as one who comes to a final decision. She spoke, and her words had the ring of sincerity that told they came from her inmost heart.

"Yes, father, I would," she simply stated. "I don't want John to do this thing. It may cost him his life. I know you are a wonderful man. I know you have everything thought out beforehand, and all has been done that can be done to insure his safety, but no one —not even you, father—can say what the outcome of this will be. Let us stop, while there is yet time—before it is too late."

Professor Melville drew himself to his full height and, with the outraged dignity of the devotee who knows nothing but his fanaticism, sternly replied:

"Nova, my child, I am ashamed of you; ashamed and grieved that a daughter of mine should allow the trivial feelings of affection to outweigh the call of science." He ceased—and there was no hint of relenting, nor change of purpose in his manner.

"Yes, yes, I know all that, father. I know that science is your all; your god. I know that John must do this to prove himself worthy in your eyes, but—but——" Again she paused.

"Yes?" coldly inquired this fine old Spartan.

"Well, just this, father. I am not ashamed of it. I love John, and I don't want him to die. I would rather have him back out, and prove a coward— but have him— than go ahead with it, and prove a hero—and lose him."

The Professor appeared perplexed. He thoughtfully ran his hand through his long, white hair, seeming to try to grasp her meaning.

"But, Nova, my dear," he finally said, "you don't understand. You can't marry John if he refuses to make the experiment. I have told you I won't give my consent unless——"

Nova stopped him with an imperious gesture. "That for your consent!" she said, snapping her fingers at him. "I am of age. I can do as I please. I have always been a dutiful daughter to you, and I still am. If your reason for opposing my marriage to John were in any way reasonable, I should be the last one to cross your will, but what you ask is neither sensible, nor human." She turned to me.

"Don't do it, John," she entreated. "If father is insane, that is no reason why you should be also." She took my hand. "Come," she said, "let us leave this cursed place and go forth into the sunshine; into the world of sanity and everyday life. Let us cease this wicked attempt at knowledge beyond what the good God has intended us to have. You don't have to risk your life to prove yourself worthy of me. It is I who am not worthy of you, for even thinking of such a dastardly business. If you say so, I am ready to marry you at once, only for God's sake, get out of here before my father murders you with his terrible inventions!"

MEN are contrary critters. Five minutes before, I had been racking my poor brain to think of some way of getting out of this fool scrape without utter dis-

grace, and now, when an opportunity offered, I held back. I suppose it was the certainty that Nova truly loved me—that she really cared—that spurred me on. If she had insisted on my going on with the experiment, I might have had doubts of her love, and so been unwilling to risk my life, but, when she showed so indisputably the depth of her feeling for me, it was impossible. I couldn't prove a coward.

I knew what it had cost her to make the confession; to propose the course she had advocated. To most people, it would have seemed the natural, the obvious thing to do. In this family, it was little short of sacrilege.

As she had said, science was the shrine at which Professor Melville worshiped. For a daughter of his to put love, fear, anything, before science, was about the same as it would be for the daughter of a clergyman to profane the sacred altar. In the face of such a love, I could not prove unworthy. Although I literally trembled with fear, I refused to do as she wished.

"No, Nova," I said, while my teeth shook like castanets, "I can't back out now. I have given my word, and I mean to go through with it." I turned to her father. "I am ready, Professor Melville."

He said nothing, but silently pointed to the glass chair. Trembling like a leaf, with the perspiration running from every pore, almost blind with fear, I walked across the room, and seated myself in what I regarded as worse than the death chair.

Professor Melville went to the switchboard, and calmly turned a knob. A blinding glare enveloped me, while the roar of a thousand Niagaras throbbed in my ears. Suddenly, the earth seemed to fall from beneath my feet. I fell down, down, down, thousands of miles, through a fathomless abyss of nothingness—into the blackness of utter oblivion.

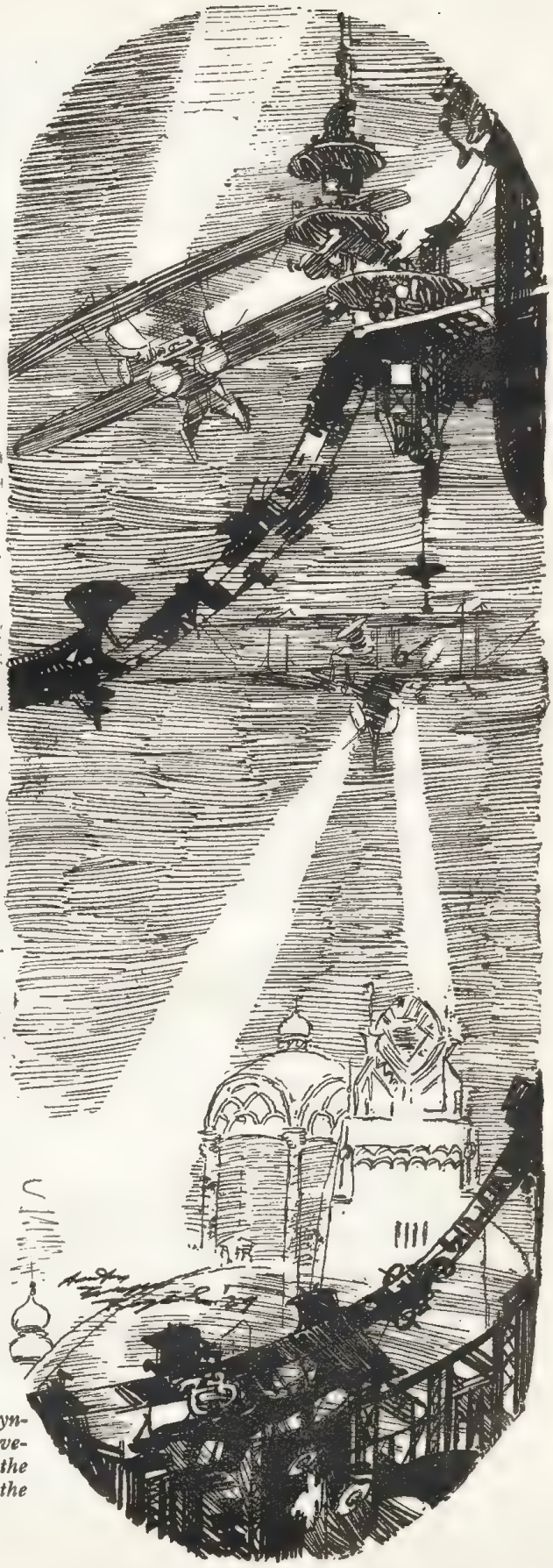
Five Thousand Years Later

ON regaining consciousness, my sensations were peculiar, but altogether delightful. A sort of torpid lethargy, in which each muscle, sinew, and part of the body seemed to rest, specifically and individually, pervaded my entire being. Literally, I *felt* that every organ was at rest. Ordinarily, of course, one cannot do this. The process is a passive, rather than an active, one. It was the queerest feeling imaginable, and can be described best by the paradox, active inaction.

It was entirely too much work even to open my eyes. What was the use of going to all that trouble, when I didn't have to? So I just lay, in complete physical relaxation, without bothering my head about anything, except the joys of doing nothing.

It will be understood this unusual state of being lasted but a short time. In a minute or so, the normal faculties of existence asserted themselves. My mind began to inquire into my condition and surroundings. From this, it was but a step to complete consciousness. I opened my eyes, sat up, and looked about me.

I lay on a little couch, in the exact center of a room, roughly about ten feet square. In each of three sides of the room was a window, consisting of an upper and lower pane of glass. The upper pane was partly covered by a cur-



The traffic was synchronized. All vehicles must do the same thing at the same time

tain of the same kind of material that covered my couch. This was a green cloth, resembling silk. Before each window was a chair, all of them identical in every respect. These were upholstered in green also. In the center of the side of the room not containing a window, was a small door. I judged this to be the door to an elevator. Apparently, it formed the only exit from the room.

At first, I was completely bewildered. I could not make head or tail of where I was. Had I been in an accident? Was this some kind of newfangled hospital? I carefully felt myself all over, to find out if there were any broken bones. So far as I could determine, everything was intact. Besides, I didn't feel as if I had been in an accident. I felt fine.

The thought crossed my mind that perhaps I had gone insane—nutty, you know—and that this queer little room was a cell in an asylum. The fact that the only way to get out was by an elevator, probably not under my control, rather confirmed this idea. My head did feel a bit queer, too. Still, I never had had any reason to think that my mind was affected. It scarcely seemed reasonable that suddenly I should have gone off the handle. If there had been anything wrong with my mind, surely Professor Melville would have noticed it on one of the many occasions when I had been at his home, calling on Nova.

This set up a new train of thought. I wondered if the professor ever could be induced to let me marry Nova, unless I did some small service to science, like taking a short trip to Mars or——

A great light burst upon me! I remembered! Shades of Julius Caesar! The time deflector! I *had tried to do something for science!* I recalled going to the Professor's laboratory for the experiment, Nova's protest, and my insistence on carrying it out.

Then—then—suffering cats, where was I? What had happened? Could it be the experiment really had succeeded? Was I, at this minute, living in some future age? What had Melville said? Five thousand years into the future! Could such a thing be? Had it come to pass? Was I, John Woodland, actually breathing, living in the flesh, an inhabitant of the world in the year 6925?

I looked about more carefully. Certainly, I had never seen the place before, nor had I ever heard of anything like it. The nearest thing to which I can compare it is one of those dinky efficiency apartments which were just coming into vogue, only greatly exaggerated. What I mean is that everything was intensified; overdone. The smallness; the neatness, the uniformity of the room were too much accentuated. It actually seemed to force itself on one, to overwhelm one's individual personality, and compel one to conform to the rules and regulations; the being of—*the apartment!*

ON a cute little green enameled table by my couch lay several small books. They were all exquisitely bound in green leather. As I have always been fond of reading, I could not resist the temptation to look at them more closely, despite my present doubtful surroundings. They appeared to be the usual kind of books one associates with a private household; mostly light fiction, with one or two volumes of a more serious import.

On opening one of the books, I noticed, to my surprise, that the printing was in green ink. I thought this a novelty that could well be generally adopted. The green color was very restful to the eyes. The language was English. Of that there was no doubt, but it was a kind of English I had never seen before.

The words seemed condensed; abbreviated; not only in the spelling, but, relative to their dependence on one another, in the actual construction employed. For one thing, all more or less superfluous parts of speech and rhetorical decorations, such as articles, punctuation, capitals, and the like, were absent. Where we would write, "The City of New York," this author (whoever he was) had cut down the phrase to, "city new york." In some cases, the abbreviation was carried even beyond this, reaching a point where the essential parts of words were joined to express, in one word, the meaning of an entire sentence. It was only after some time that I deciphered the odd looking word, "goseshor," to be a condensed version of the phrase, "Go to the Seashore."

Of course, such a method of composition rang the death knell of grace and beauty. Literary style was at an end. Indeed, there could be no attempt at style. The plain, bald meaning was expressed, and that was all. In this sort of English, any tyro of the grammar school was on equal terms with Shakespeare.

I reflected that here was the lamentable outcome of the practice of using feature headlines, so much favored by the newspaper fraternity. Atrocities such as, "Two Brothers Marry"; "Homeless Ends Life"; and others of a similar nature, had done their evil work.

At this point, my play of fancy brought me up with a round turn. I recognized the fact which tacitly I had assumed—I actually had been transported to the future. If this were true, it behooved me to be on my guard. It was difficult to estimate what dangers might be in store for me.

I was pretty badly scared. After a little thought, however, I managed to calm down. Now that the initial danger of traveling through time had been safely passed, surely I had little to fear. No doubt the inhabitants were as much ahead of our time, in the humane attributes, as we were ahead of the people of Pharaoh. Moreover, a bit of reflection showed me that I had tangible proof I was not in danger. It could scarcely be supposed that I landed directly on a comfortable couch when I burst into the future. Some one must have put me there, attended to me, looked after me; all of which indicated no harm was intended.

Somewhat reassured by these thoughts, I began to cast about for means to prove definitely whether or not I really had traveled in time. An easy way at once suggested itself. I opened the book, which I still held, at the title page, to search for the date of publication. Yes, there it was—6924! So, it was true! I actually had accomplished the amazing feat of leaving the age in which I had been born, to move forward in time approximately five thousand years!

It is difficult to determine to what folly my wonder and awe would have led me, had I been left to myself. However—I was not.

The little door to the elevator opened, two people stepped out, and advanced towards me, across the room. In spite of the reasoning I had done, I was mighty nervous. My hand unconsciously took a tight grip on the automatic I had had the forethought to bring. The expression of extreme friendliness on the faces of my visitors, however, made it evident that my precaution

was needless. One may well believe I looked at them pretty carefully.

The older of the two was a man, whom I judged to be sixty, or thereabouts. The younger was a girl, of about nineteen or twenty. No doubt it was a case of father and daughter.

The man was dressed in a tightly fitting upper garment of the omnipresent green, which resembled a jersey, such as football players wear. In passing, I may remark that the color green was in favor with this people, due to its restful effect on their eyes, which had been weakened, throughout the centuries, by the excessive use of various electrical appliances, as a substitute for sunlight. The use of green, however, was not universal, as will appear in the course of my narrative. To return to my description:

Around the gentleman's neck was a white linen collar, similar to one of our "sport" collars, with the exception that the points were easily a foot long, and extended down across his chest. They were fastened to the jersey by large, white pearl buttons. In his mouth he jauntily held a cigarette holder of a pattern which made me rub my eyes to see if I were really awake.

It had a central stem, upon one end of which was the mouthpiece. From the other end of this, six separate holders branched off, in the manner of a symmetrical stag horn. As each of the six holders held a lighted cigarette, the owner gave a fair imitation of a small steam engine.

PAPA'S trousers evidently were of the latest fashion. They were of a pretty grass green and fitted almost skin tight, until within about a foot of the floor, when they expanded into enormous bags, fully three yards in circumference. So ample were these sacks, that they actually dragged upon the floor, in the manner of a woman's train in years gone by. With a smile, I recognized in this grotesque make-up an extreme development of the "Collegiate" trousers of the twentieth century.

It now seemed about time to turn my attention from the old duck to his fair companion. I wondered how *she* had evolved from the present day flapper. I was prepared for something pretty strong, but the bizarre looking female I did see went a shade beyond even my wildest expectations.

Her hair was shaved as closely to the head as was possible without cutting the scalp. The same style at present is in vogue among the patients taking a temporary rest cure at Sing Sing or Atlanta. It was evidently the twentieth century bob raised to the *nth* power, or to be more exact, *lowered* to the 1/nth power. The effect was sweet. Her eyebrows had been entirely removed, which produced an effect scarcely human.

The lady's skin was a dead white—not the pink, flesh color called white by courtesy, but real white, like snow. Of course this was artificial. It was obtained by injecting a certain grease, or face cream, into the pores of the skin. The process was extremely painful, and frequently fatal, but it was necessary in order to be in the fashion. Let not the reader cavil at this. I have heard of something similar, even in our own day. It has always been necessary to be in the fashion. One of the greatest crimes a person can commit is not to follow the mob in the matter of dress, but to display personal taste and discrimination. However—to proceed:

On each cheek, the girl displayed a geometrically perfect circle, about an inch in diameter, of bright, flaming crimson. Her lips were profusely painted with a darker shade of red.

These little touches of color formed a charming contrast to the corpse-like pallor of the skin.

The skirt of this belle of the future stopped about a foot above her knees. The legs were bare from there down to her dainty little feet, which were encased in tightly fitting slippers, with heels at least six inches high, on which the pretty creature gracefully balanced. Oh, by the way, I forgot to mention that she had designs, similar to wall paper, painted in different colors on her legs. This was probably a derivative of the practice of letting the sun burn decorative figures on one's back and neck, which has found favor at our seaside resorts.

This queer looking pair drew up two of the little chairs, and sat down beside me with the evident intention of engaging me in conversation. I sincerely trusted the spoken language would not be a replica of the written. If they were to abbreviate words, and combine whole phrases in the way it was done in the book, it would be next to impossible to understand them, if they spoke with the rapidity common to ordinary speech.

Fortunately, the spoken English was not quite so advanced. I surmised that the writing, while correct from their viewpoint, set a standard a little difficult to meet in everyday conversation, just as you and I find less trouble in writing correctly, when we take time to correct and revise, than we do in speaking properly, when we must select the right words and phrases without forethought or consideration.

To be sure, they spoke a dialect not like the English of today, but nevertheless it was English. Perhaps it bore the same relation to our English as ours bears to the English of Chaucer. The fact that the language had not changed more than this, in a period of time roughly five times as great, was accounted for by better means of communication, and other advantages, which had tended to eliminate dialects and provincialism.

The tendency to abbreviate, to shorten and combine was present, but not to so marked an extent as in the writing. There was also a slurring and clipping of final syllables, particularly consonants. While, of course, not familiar with their colloquialisms and innuendoes, I felt that slang formed a large part of their speech. These peculiarities, and others, gave to their conversation a directness and speed that was gained by the sacrifice of all dignity and euphonic beauty.

Yet, if one reflects, this was exactly what might have been expected, from the signs of our own time. It was simply carrying on a principle old as the hills. Where our ancestors said, "John's son," we say, "Johnson," which five thousand years had further condensed to, "Jons'n." Where we slur the word, "running" to produce "runnin'," time had carried on the process and begot "run'n'."

The use of slang, the practice of calling things by arbitrary or pet names, so prevalent in our own time (*hooch* for illicit liquor, *pep* for energy, *a Jane* for a girl, and so on, *ad nauseam*), after fifty centuries, had reached a point almost beyond belief. Everything, even the most sacred objects, had a slang name, and was referred to by some pseudonym almost unintelligible to one who did not understand the particular train of subconscious thought which gave rise to it.

The old man, whose name was Helen Mason (the de-

sire for equality between the sexes had abolished distinguishing sex names long ago), after a polite inquiry about my health, expressed a desire to know from whence I had come. He and his daughter occupied this apartment, and, while in the midst of their evening meal, had been amazed and horribly frightened to see me suddenly appear before them.

THE reader must understand that the walls of the apartment were no barrier to a visitor from another age. So far as the present goes, the apartment might, and probably did, occupy the very same place as Professor Melville's laboratory. The danger was that I would enter the future, not in the space occupied by somebody of the present, but in the space occupied by somebody of the future. I could travel *through* the walls, but could not materialize *in* them. My speed through time was so great that, relative to me, objects of the future did not exist, until I slowed up sufficiently to materialize. When I did this, objects of the future bore the same relation to me that they did to one another. Two objects could not occupy the same space at the same time. If I had had the misfortune to materialize *in* something, my swan song would have been sung. However, Professor Melville had an ingenious device by means of which he could prevent this, which the facts proved he had done.

After the initial shock had worn off, my hosts had reached the conclusion (surprisingly near the truth), that I was the subject in some kind of scientific experiment. As it was plain that I needed assistance, these two well-meaning souls had lifted me up on the couch, and taken such steps as their knowledge afforded, to restore me to my senses. To do this, they had used one of a number of rays discovered since my time, which, by the way, was the cause of my agreeable sensations on awakening.

By this time, I was fully aware I need fear no harm. I felt quite at ease, and looked forward with enthusiasm to exploring the secrets of the future.

I explained about the time deflector, and how I happened to be there. They accepted my explanation without contradiction. The idea of time traveling was not a novelty to them. Although no attempt in that line had been made for over a thousand years, previous to that time several attempts had been made, however, without success. I was the first man who had actually done it. The Columbus of Time, I rather grandiloquently pictured myself being featured in the Sunday supplements, if ever I returned safely to my own age. However, that was a long way off. I had just arrived in the future, and must make the most of my chance.

"Your case remarkb'l," said Mr. Mason. "Bamzo like you see big fry."

"I'll yell up first gabbers," agreed Miss Mason. "Hip 'em up som'th big on job."

The meaning of all this was that my position as an alien from another age was so unique that the young lady must inform the governing council of the city, by phone. To save the reader from insanity (as it looks worse than it sounded), such conversation as may be recorded in the rest of this article will not be given in the dialect of the future, but will be translated into the language of the present.

Mr. Mason, who seemed a kindly disposed old chap, suggested that I might like something to eat, before visiting the council. It seemed there were two ways of getting a meal, both developments from the customs of the present.

One could go to a public dining room, of which several were conveniently located about the city, and which were conducted upon the automat plan, or one could have a canned meal, shot by pneumatic tube from the community delicatessen establishment. In either case, no ordering was required. The menu was standardized, throughout the realm, by governmental regulation. The same kind of food was served wherever, or however, one elected to dine. I considered this a distinct step backwards. Gone was the personal touch; useless were the taste and discretion of the competent housewife. No more could one take part in the charming little teas and dinners, that used to form so agreeable a means of displaying one's individual refinement in entertainment. All was reduced to a dead level of bureaucratic mediocrity.

With the idea of viewing the people of this latter day, I was in favor of going to a public dining place. Miss Mason (whose first name, thank God, was Mabel), laughingly dissuaded me. She explained, I might not like it, due to the custom, obligatory by law, of running at top speed around the room, between every course. This was directed by certain officials, who beat time with sledge hammers upon hollow cylinders of iron, about the size and shape of kitchen boilers. Sometimes, by way of variety, they shrieked and groaned, like demons from the infernal regions. Mabel said this practice had been in use for some time, but had not been enacted into law until the year 6903, when certain progressives had gained control of the government.

So we decided upon a delicatessen dinner, which arrived promptly. Each course was contained in its own little can or cylinder. As dinners go, it was not half bad, although much of the food was plainly an artificial substitute for the real thing, not greatly to my liking. These artificial foods, of which there were a great many, were too clearly designed to nourish the system, rather than to tickle the palate.

THE dinner was served without tables. This method was the most abominable one could well imagine. The diner was expected to hold three or four dishes, and feed himself at the same time. Mr. Mason remarked that, to a large extent, social caste was determined by the number of dishes one could manage successfully. He stated that, although he had never seen her in action, it was whispered among those who knew, that the well known society leader, Mrs. de Sans Gelt, easily could handle seven dishes at once. While it seemed to me that, in this land, the octopus would be the arbiter of fashion, I wisely kept my opinion to myself, and said nothing.

Dinner over, Mabel and I smoked our pipes, while her father washed the dishes. He did this with the dexterity of long practice, and seemed surprised when I complimented him on his skill. Both he and his daughter took this as a matter of course.

By a little further conversation on this topic, I was astonished to learn that custom now decreed that all housework should be done by the man. The fair sex was too much occupied with business and social engagements to give time to it.

Some of the more daring spirits thought it proper for the husband to remain at home altogether, and take his support entirely from his wife. However, this was a little too radical for a large conservative faction, which

felt that the husband at least should make a pretense of helping to provide a livelihood.

When he had tidied things up a bit, Mr. Mason remarked that, as it was now a half hour after the time set by the council for our audience, it would be well to get started.

I leaped to my feet in serious alarm at having offended those in high place by keeping them waiting, but was reassured. My hosts told me it was quite the thing to be late. Well bred persons always were late to an appointment, only "mutts" and "boobs" (those of low degree), being on time. I could not forbear a chuckle when I recalled how, in my own time, it was thought all right to get to a friend's house for dinner about five minutes before the meal was served.

Mabel took a little can of liquid paint from her vanity case, and applied it to her face and lips with a delicate camel's hair brush, after which she announced herself as ready to proceed. Mr. Mason was not to accompany us, as the best practice decreed one lady should not act as escort to two gentlemen at the same time. Besides, the old chap had some sewing to do, which would fully occupy his time.

We descended to the street, in the little elevator, and entered a closed car. This conveyance was much the same as one of our autos, with the exception that the power was supplied by radio, from a central plant. The driver, however, retained complete control of his machine.

Our progress was a nightmare. It was good form always to be in a hurry. As a result, we sped along the crowded streets at a pace that made an old back number, like me, gasp.

Nor was this all. The traffic was synchronized. All vehicles must do the same thing, at the same time. The various evolutions were indicated by different colored lights, that flashed on and off at the correct time.

A red light meant a car must turn around rapidly, in a circle, three times. A green light caused the driver to go backwards, while a yellow light indicated the driver should come to a dead stop, and blow a steam whistle for a designated period of time. No punishment was inflicted if a driver killed anyone, but the most severe penalties were imposed on the wretch who failed to perform the proper synchronized movement at the proper time.

FROM such glimpses as I was able to obtain, I found the architecture of the year 6925 was exceedingly uniform and dull. All the buildings were exactly alike. They were of an oblong shape, similar to long, narrow boxes, standing on end. Their height was generally about two hundred stories. No attempt was made at beauty of construction. Utility was the sole purpose.

Mentioning how poor the appearance of these structures was, in comparison to the diversity of my own time, Mabel informed me that all buildings must be approximately the same, under a law passed in 6552, which provided standardization of design. The object was to prevent those of taste and culture from giving offense to the multitude, by a display of their superiority.

The sidewalks were thronged with people. They all rushed along at so desperate a speed I supposed they were fleeing from some danger that threatened them. My companion set my fears at rest, explaining the street we were in was the promenade of fashion, the Fifth Avenue of the city, as it were, and that it was considered "the thing" to dash madly along as if on business of the utmost importance.

It was evening. The electrical display was of a degree of magnificence that almost beggars description. Each building, and every window in each building, was outlined in festoons of blazing, throbbing, living fire; green, blue, red, golden, and even a flashing silver. They had perfected a delightful idea, only in its infancy in the twentieth century, of throwing different colored lights on different floors of the towering skyscrapers, but, whereas we generally used only the prime colors for this purpose, the experience of five thousand years had achieved marvelous blends of the intermediate shades, with an effect to rival the glories of Heaven itself. In justice to the age, which already I had begun to suspect was not the millennium I had supposed, whatever it lacked in real artistic taste was amply made good by proficiency in supplying an artificial substitute.

Advertising had developed to a place of prime importance. Wherever one looked, one was told to buy this, or to use that. Fiery letters, fifty feet in height, proclaimed to the wondering skies that, "Dr. Fake's Face Cream Plucked Pimples," while beneath one's feet, in the glass pavement, was the shimmering assurance that "Prof. Nutz Korn Kure Kured Korns."

Every private car had advertisements painted on it. To my utter astonishment, several bald-headed fellows had devoted the space where their hair wasn't, to inform an admiring world that, "Hare's Performing Hares Could Be Seen In The Hippodrome."

The craze for advertising even had invaded the field of religion. Nearly all the churches had large signs displayed, proclaiming the particular brand of salvation to be found within. Probably the climax of ribald indecency was reached by two sects, whose temples of worship were located on opposite corners of two intersecting thoroughfares. One of these dignified organizations invited the devotionally inclined to "Flop Inside And Hear A Peppy Shouter Sass the Devil"; while its rival, across the street, tried to entice the passer-by to "Help Bellowing Bessie, The Female Baritone, Roar A Few Hymns." Mabel told me even the very hymn books and Bibles in these sanctuaries were filled with advertising matter, the same as many of our magazines are inter-paged. I wondered what one of the sedate bishops of some of our noble houses of God, or the silver tongued orators of some of our different types of religion, would have said to have been there, and to have seen the church commercially exploited on a par with the circus?

My reflections were interrupted by our arrival at the Council Hall, where the council was in session. After listening to my story, the First Grafter, as the leader was called, very kindly suggested that, as I must be tired after my stupendous adventure, further questioning could be postponed until the morrow.

He directed his assistant, who went by the title of Chief Sycophant, to assign me a suite of rooms in the Council Hall, and appointed an officer, called The Historian, to interview me, after I had rested, on the customs and manners of my benighted age.

Mabel was dismissed with a suitable reward, and I was conducted to my quarters where, in spite of what I had been through, I soon fell into a sound and dreamless slumber. So ended my first day as a citizen in the year 6925.

Several bald-headed men had devoted the space where their hair wasn't to inform an admiring world about "Hare's Performing Hares"

The Historian

EARLY the next morning, The Historian called and questioned me with great interest. One can well believe it must have been a red letter day to him. His existence had been spent browsing among musty old books and documents dealing with men and events of a little known past, of which, at best, knowledge was only fragmentary; a fact here, a surmise there; in short, his life work had been in a field of endeavor where conclusions could only approximate the truth.

Yet here was a man, by a miracle of science, brought before him from out the silence of the dead past; to talk to him, to explain to him, to make real before his delighted eyes the things most dear to his heart, at which, hitherto, he had only guessed.

We talked of many and varied things, nor was I unwilling fully to satisfy his curiosity. On the other hand, remembering my purpose in daring this unheard of adventure, I did not neglect to receive, as well as to impart, information.

Eventually, as might have been expected, the conversation drifted to politics. I was anxious to know what developments had taken place, what changes had been wrought, how men were now ruled and governed.

Geographically, the world was different. The little community; the small, independent nation, had disappeared from the face of the earth. However, the process of amalgamation was not entirely complete, even after five thousand years, but, whereas the difference had been that of an economic or political nature, now the cleavage was along the broader lines of race.

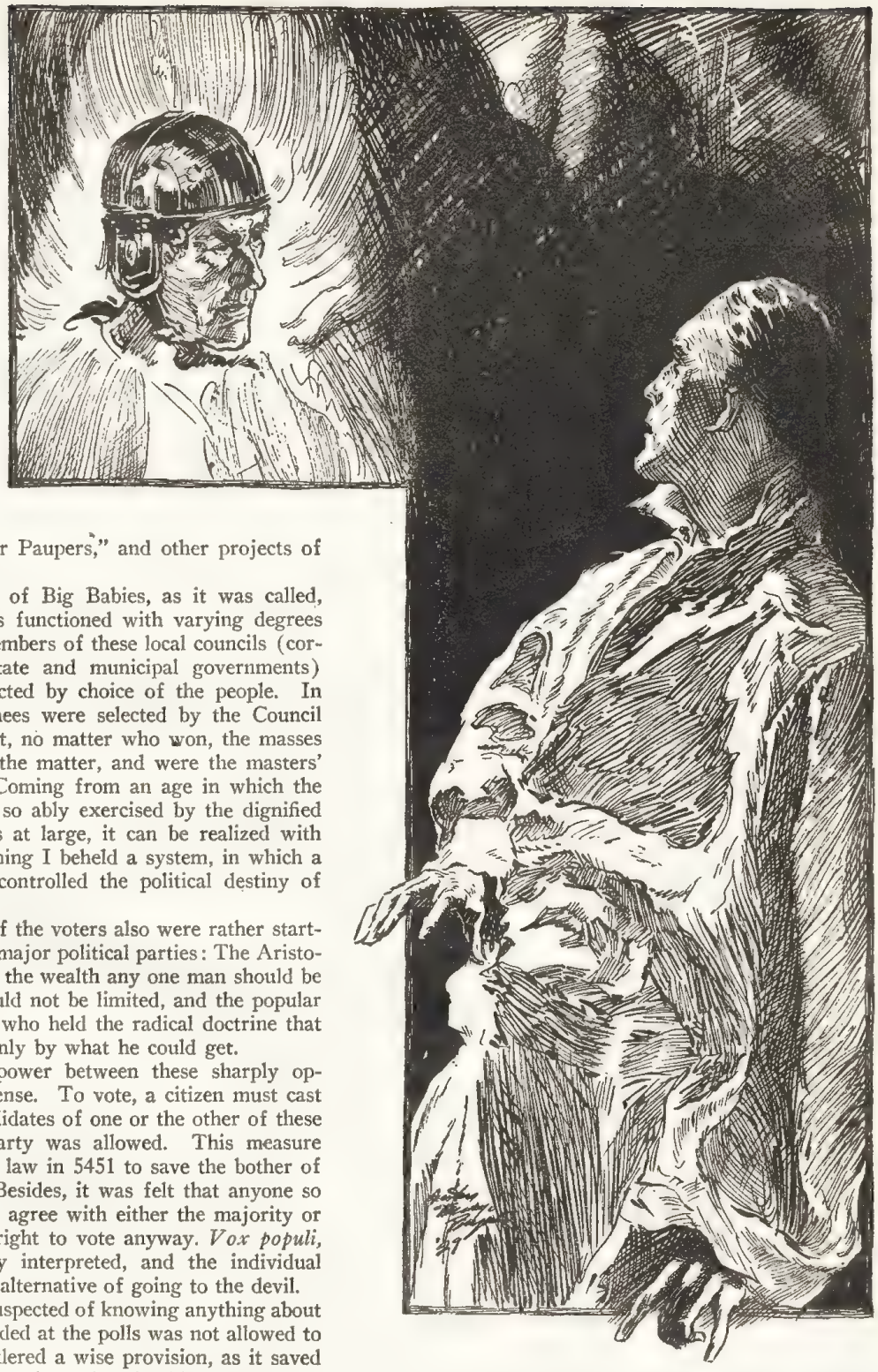
The white race had buried the hatchet of internecine strife, and formed one nation, stretching from the easternmost boundary of the Mediterranean, across all Europe, westward through both Americas, to the shores of the Pacific Ocean. This powerful coalition was under a single council which sat, at stated periods, in the most important cities of the realm.

Asia at last had awakened from her sleep, with consequences very likely to spell disaster to the white man. The entire continent was under the rule of a Chinese Emperor, Sing-fu, who was a man of ability, skilled in intrigue, and ruthlessly ready to take advantage of any slip on the part of his western rivals. No longer was the hated "foreign devil" permitted a say in the affairs of Asia. Indeed, the conditions had been reversed, and the Asiatics sought but a pretext to interfere with us. This inscrutable people loomed, just beyond the horizon, like an ever gathering storm-cloud that threatened to burst at any moment and overwhelm the occidental world, with the myriads upon myriads of her uncounted man power, now armed to the teeth with every modern weapon, which the wit or cruelty of the human race could suggest.

Africa also had become civilized, and was under the despotic sway of a Zulu prince, who had driven the whites beyond the borders of his kingdom. The little country of Liberia formed the nucleus of this mighty power. College-educated negroes from America, who had elected to devote their brains and abilities to governing their less talented brethren, comprised the nobility of the reigning monarch's brilliant court.

The Negro, if let alone, and not provoked, is proverbially a peace loving man, and this nation of blacks, situated in a climate and habitat for which they were naturally fitted, had made wonderful progress in all the scientfic and cultural arts. They would have been an ornament to society, if some ass had not proposed a law to prevent marriage between white men and negroes. Although neither race had the slightest desire nor wish to intermarry, such a law, thus expressed in concrete form, naturally angered the Africans. Merely as a point of honor, its repeal was demanded. This being refused, Zemla, the king, recalled his ambassador and prepared for war. The danger, however, was somewhat lessened by the fact that the Negro has never been a seafaring man, for which reason it was hoped Zemla's navy would not prove quite adequate for a conquest involving a control of the waterways, as well as the airways. It was thought possible to keep his armies penned up in Africa, although all idea of invading *his* tropical country of swamps and fevers was utterly abandoned. The situation was somewhat in the nature of a stalemate. At the same time, substantial concessions were granted to Sing-fu, to prevent a combination of the Africans and Asiatics, which would give Zemla a formidable navy and mean the ruin of the western world. The "white man's burden" seemed to have become the burden of avoiding extinction.

AS practiced by the white race combine, politics were peculiar. The supreme authority was vested in an elected council of ten, to which no one was eligible who was not worth at least a hundred million dollars. Minor qualifications were that members must have been divorced five times or more; must be able to play golf; must be collectors of some note, and, finally, must subscribe largely to certain worthy charities such as, "The Spread of Culture Among the Eskimo"; the "Movement to Pro-



To add to my amazement and alarm, I had a sickening sensation of not really being in the room. The mental condition to which I allude is most difficult to describe

vide Dinner Coats for Paupers," and other projects of equal nobility.

Under this council of Big Babies, as it was called, numerous local bodies functioned with varying degrees of authority. The members of these local councils (corresponding to our state and municipal governments) theoretically were elected by choice of the people. In actual fact, all nominees were selected by the Council of Big Babies, so that, no matter who won, the masses had no real voice in the matter, and were the masters' tools in any event. Coming from an age in which the sovereign power was so ably exercised by the dignified ballots of the citizens at large, it can be realized with what horror and loathing I beheld a system, in which a few prominent men controlled the political destiny of the nation.

The qualifications of the voters also were rather startling. There were two major political parties: The Aristocrats, who taught that the wealth any one man should be allowed to amass should not be limited, and the popular party; The Peasants, who held the radical doctrine that it should be limited only by what he could get.

The struggle for power between these sharply opposed parties was intense. To vote, a citizen must cast his ballot for the candidates of one or the other of these parties. No third party was allowed. This measure had been enacted into law in 5451 to save the bother of counting the votes. Besides, it was felt that anyone so queer that he couldn't agree with either the majority or the minority had no right to vote anyway. *Vox populi, vox Dei* was literally interpreted, and the individual thinker was given the alternative of going to the devil.

Any one who was suspected of knowing anything about the subjects to be decided at the polls was not allowed to vote. This was considered a wise provision, as it saved candidates the trouble of making intelligent speeches, since, the voters all being equally ignorant of the principles at stake, no reasonable explanation of a platform possibly could be made, even if the candidates had known how to offer such an explanation, which they didn't.

The benevolent consideration of Government for its children was prettily expressed by a law which provided red ballots for one party, and green for the other. This permitted those who did not have enough brains to mark a cross in the proper space, to have a share in public questions of general interest, such as international finance, the tariff, relations with foreign powers, internal development of natural resources, and other matters of vital importance.

I was interested to learn that the good old jury system was still in force. The problem of obtaining jurors of a proper mentality had at last been solved. Every juror was subjected to a psychological test to determine his

fitness. If he failed to come up to standard, he summarily was rejected.

The test included a complete inability to understand the value of evidence, an emotional nature easily swayed by the appeals of the attorneys, and an appreciation of the innocence of all good-looking women.

The system was a great success, and crime was severely punished. In support of this, was cited the case of an old man who, under the mistaken notion that he was starving, had stolen a Dutch Cake. The criminal had been arrested (even before he had eaten the Dutch Cake), and, for his vile offense, sentenced to ten years' penal servitude.

Premeditated, first degree murder had died out. No one in his right mind now committed homicide. This was supported by a list of over a hundred cases in which the scientific knowledge of the jury had judged the defendant to be insane. The beautiful part of this was that medical science had reached such a degree of skill that, with one exception, all of these insane people had been cured within a year of the time of the trial, and restored to their friends.

The exception was a man who shot a burglar who had just stabbed the man's wife and thrown her from the nineteenth story window, without giving the poor robber an even chance for his life. This unsportsmanlike wretch had been called insane from force of habit, but popular indignation at such a miscarriage of justice had demanded a new trial, at which the culprit had been convicted of first degree murder, for which he later paid the penalty.

I was interested to learn what developments had taken place in the arts, painting, music and poetry. The Historian said great progress had been made, particularly in the matter of getting publicity for the artists themselves.

In my day, it had been extremely difficult for a poet, or an artist, to put his creations before the public; many an unlucky chap died unknown in a garret, who, after his death, was discovered to have been a genius.

THANKS to the organization of the modern world, this was no longer the case. Now, anyone could command a vast audience, by means of the Exploiting Bureaus, as they were called. These concerns were an outgrowth of the "producers" of our time, and, for a graded fee, undertook to give any amount of publicity desired. For ten jingles (about twenty dollars of our money), they would make one known in his home town. For a hundred jingles, the publicity would include the state, and, for a thousand jingles, one could become famous throughout the civilized world.

A case in point was the well-known opera singer, I. Will Bray. This man had been the driver of one of the refuse cars in an applesauce factory. Finding he could sing, he had joined one of the many local glee clubs, where he had given such great promise that it was evident he possessed wonderful talent.

Unexpectedly inheriting a sum of money, he had consulted Push, Pull & Buhl, the well-known exploiters, who, in three months, without any musical training whatever, had brought him out as leading tenor in the new opera, "Papa's Apple Dumpling," a romance of subway life, in which he had scored an initial success that had made him.

The music of this age would sound somewhat peculiar to our ears. Harmony and rhythm had ceased to be of any importance. The idea underlying all musical composition was to express something; to give a representation of the overwhelming emotions of the soul.

The charming piano number, "Beat the Traffic Cop," was a case in point. The genius who composed this desired to musically express the feeling of confusion. To do this, two pianos were used, one tuned a half note below the other. On one instrument an artist played "Home, Sweet Home" backwards, while on the other instrument, another performer started in the middle and played *both ways,* going forwards with his right hand, and backwards with his left. The maestro who got done first was adjudged the winner.

Poetry had advanced, too. No definite rules of construction were observed. The poet gave free reign to his fancy, unhampered by such restrictions as coherent meaning or English grammar.

One of the gems I read was called "Shadows." This had been written by laying a dictionary on a table, under a bright light, which was allowed to fall on the book through a number of holes in a cardboard interposed between the light and the book. The words *in shadow* had been selected at random, which had given rise to the name of the poem. This was considered a masterpiece of hidden meaning. To me, the meaning was entirely hidden.

Another poem, called "Odd and Even," by a poet put out by the exploiters, Hokum & Bunk, who operated on the cut price basis, had been written by selecting every other word in a cook book. The profundity of this was held to be sublime. It was said to mean that the odd would be even, and the even would be odd. As the author had rhymed "cow" with "bilious," it was odd enough to get even with anyone who had the misfortune to read it, at any rate.

Also I had the pleasure of seeing the famous painting, "Virile Spring." This was a product of Mutt & Butt, the well known Paris Exploiters. It had been painted by M. Daub, who formerly had been chief whitewasher to the Grand Duke de Broque. The subject was a live onion, at repose on a bed spring. The bed spring represented the season "Spring," while the onion symbolized "Strength."

A World Deteriorated

BY this time, the reader will have come to the conclusion the world of 6925 was inhabited by fools, or madmen. Of course, conditions were not quite that bad, but the general level of intelligence was very low. A sense of responsibility, all that is included in the word morale, was entirely lacking.

Here and there, a few men of ability, such as the Chinese Emperor, Sig-fu, the African King, Zemla, or my friend, The Historian, stood head and shoulders above their fellows, like beacon lights in a sea of darkness, and, by superhuman efforts, managed to keep things going, but the population at large was practically worthless, spending its time in a senseless round of pleasure, without meaning or profit.

A feeling of indifference, a pagan viewpoint of "what's the use?" pervaded all ranks of society. Rich and poor alike were sunk in a slough of mental torpor that truly was pitiful. So degraded were they that the *wish* to improve had all but vanished. They were satisfied.

The important personages, the national heroes, were no

longer statesmen, inventors, scientists, poets, musicians, and the like—as in my time—but were individuals who had done something, however ridiculous, to attract the popular fancy; to arouse the fleeting interest of a jaded and worn-out race that had well nigh lost the power of consecutive thought.

The men of the hour were charlatans and mountebanks. Superficiality, display, an ostentatious parading of make-believe, took the place of real knowledge.

Medicine, as practiced by the physicians of this age, was simply quackery. While using an incomprehensible jargon of pseudo-scientific terms, doctors pretended to cure by measures that were little short of voodooism.

Religion had become either a stereotyped observance of ritualistic formulae, of no spiritual significance whatever, or an uncontrolled display of the emotions that debased the clergy to a cross between a barker for an old-time circus and a witch doctor.

The practice of law—the bulwark of any civilized nation—had become so entangled in precedent, appeals, exceptions, and useless rules and regulations, that it served to protect the clever criminal at the expense of the just citizen.

In a land teeming with every possible kind of law, the people were utterly lawless, without respect for a judicial system too feeble and indolent to enforce its own decrees.

Bands of criminals terrorized the country. It was unsafe for persons to be abroad after ten o'clock at night, since the police could not, or would not, protect them, and the law prohibited private individuals from carrying weapons for their own protection. This law, strange to say, was one of the few that were rigidly enforced. So intricate and involved were the processes of tricking the law, that in some cases, associations of criminals actually had organized openly, and been granted governmental charters.

Turning to the industrial arts, the picture was equally dismal. Already civilization had broken down. Already had begun the death march to barbarism. To be sure, the marts of trade still functioned; buying and selling yet went on; but the seeming prosperity was but a shell that concealed the rotten core within.

Everything was out of order. Nothing would work. Great factories stood idle because complicated machinery essential to their operation was out of repair, and enough skilled mechanics could not be found to make the needed adjustments.

In the rural districts, things were the same. Vast stretches of farm land lay uncultivated because the ground had been worked out and the average farmer did not know how to make it again productive, and could not have obtained the needed chemicals, if he did.

The transportation system was disorganized. The underground tubes had become foul with noxious gases. The air ships, that once proudly had winged their way across the skies, were no longer safe, due to defects in their machinery, which could not be repaired for lack of the necessary knowledge or materials.

The surface railroads, where, in a more happy age, express trains had rushed along at speeds of two and three hundred miles an hour, now were dangerous in the extreme. Too many accidents took place. These were chiefly due to mistakes in routing, or to a failure, on the part of the train crews, to understand simple orders.

Everywhere was laxity, inefficiency, lack of interest, cynical indifference. Triviality, pleasure, excitement, the lure of the flesh, had usurped the throne of intellect. The handwriting was on the wall. The knell had tolled. The end was near. The last act of the drama of civilization had been played, and the final curtain was ready to be rung down.

The Mendelian Law Neglected

As stated, The Historian was one of the few remaining men of genius. By a mistake on the part of the ruling grafters and parasites, he had obtained his office, which was a life position from which it was difficult to remove him, even by means of the corrupt methods available.

He leaned back in his chair, deep in thought. His thin, finely chiseled face, surmounted by the wide brow of the scholar, from beneath which the deeply sunken eyes glowed with restless energy, was the picture of hopeless despair. This, then, was the end. The goal towards which mankind had struggled so laboriously, throughout the ages, was but to return to the depths from which it had sprung. *Sic transit gloria mundi.*

The old Historian wearily sighed, and ceased his reverie, as one who has faced the worst, and accepted a fate from which there is no escape.

"Ah, well," he murmured, half to himself, "it was inevitable. What else could we expect?"

Scarcely knowing what to reply, I muttered some platitude, which he either did not hear, or to which he paid no attention.

"We brought it on ourselves," he went on. "It was our deliberate choosing. We had it in our power to be as gods, and we chose—this!" His arms slowly traversed a half circle, which served to designate the world of his time.

"How do you mean, Historian?" I made bold to inquire. "In what way did mankind wilfully produce this result? Wherein did we fail?"

As he replied, the old man's gaze seemed to pierce me through and through. "We failed by neglecting to make use of the intellect with which the Creator endowed us; by blinding our eyes to the truths of science, which we knew full well, but which we dared not use. Man refused to improve his own brain power; to increase his own mentality."

The injustice of this seemed plainly evident. As the lone representative of my age and race, I felt called upon to take up the cudgel of defense.

"Why, Historian," I objected, "surely you do not mean what you say? Of course, I do not know what succeeding ages may have done, but, so far as my own period is concerned, the exact reverse is true. It was the pride of my nation that the means of education were provided for all, and that everyone, rich and poor alike, could enjoy its benefits."

My companion smiled a pitying, tolerant smile, much as one does to a child, who means well, but fails to understand one's argument.

"My friend," he explained, "no one denies the truth of what you say. It is a well known fact that your age was indefatigable in providing every possible means of education, but——" he paused significantly, and emphasized his further remarks by tapping the palm of one hand with the long, slender forefinger of the other, "but, I say, that is just where the fault lay. They tried to improve the mentality of the race, *without improving the race.* This was a hopeless task, and could have but one

end. It failed—and the ridiculous men and women of today are the result of that failure."

CERTAINLY this was a new line to me. I had always thought lack of intellectual power was caused by lack of education. From this, it naturally followed that, if all the people could be educated, the general mentality of the race would be raised. Yet here was a man, of no mean capacity, who believed directly the contrary. I was highly interested, and eagerly listened to his further remarks.

"Education is not brain power," he continued. "Education is only the training of such intelligence as one happens to possess, to function at its best. In itself, education will not produce brains. To illustrate: Suppose a man is born with a certain talent for music. Then a musical training will enable him to make use of his talent, but, if he did not have the ability in the first place, no amount of musical knowledge will make him a musician. Education only develops. It does not create. That is the function of Almighty God."

"While I see that quite plainly," I answered, unwilling to give up my pet idea, "to me, it seems to cover only half the truth. There are the children to be considered. Is it not true that the benefits of education are passed along; that the children of the educated will be more intelligent than the children of the uneducated?"

"Decidedly not!" he emphatically denied—to my astonishment. "Education is an acquired characteristic and, in spite of the Darwinian theory, no satisfactory instance of the inheritance of an acquired characteristic has ever been furnished. You can't teach a man Greek, and expect his children to be born with a knowledge of Homer," he whimsically concluded.

"Then, according to your idea, mental power is inherited, and a man of ability should have children of ability? To use your own illustration, a great musician should have children of musical talent?"

"Not directly," The Historian qualified. "Genius is produced by the accumulated action of inheritance. While a child born to a musician may not possess musical ability, a child *both* of whose parents are musicians is very likely to possess musical ability, and a child whose forebears for several generations were musicians, is almost certain to be a musician also. It is not the individual inheritance that does the trick. It is the successive building up of generation upon generation.

"The experiments with peas made by Rev. Gregor J. Mendel, an Austrian Augustinian Abbot, who was born in 1822 and died in 1884, showed that many characteristics were determined by certain factors, called allelomorphs, behaving as units. Of particular application to our argument is the fact that these factors possess alternatives, which, in crossbreeds, unite to form all possible varieties of combinations.

"From this it follows that, when an individual possessed of a certain quality mates with an individual not possessed of that particular quality, and the offspring do likewise for several generations, the particular quality, by being combined with different qualities, tends more or less to be bred out of the stock, and that only in the rare case of an atavism will it reappear.

"On the other hand, when like qualities mate, and successive generations do likewise, the quality—be it desirable or otherwise—will be augmented and intensified.

"While the subject is extremely complicated, and cannot be reduced to simple terms, for purposes of illustration we shall imagine an ideal case, which really could not happen in the way we suppose. However, crude as our illustration may be, it will give at least the germ of the idea, although in actual life, so many different factors would mingle with the particular quality, that the results never could be obtained in a pure form, as in our example.

"Say that a man has one unit of mathematical ability, and that he marries a woman who also has one unit of mathematical ability. The mathematical units will unite, and their child will have two units of mathematical ability. Now suppose this child marries some one who has two units of mathematical ability. Their child will have four; the next generation, continuing the excellent practice, will have eight; the next sixteen, and so on, in geometrical progression, until, eventually, a Newton or an Einstein is produced. Conversely, if a similar method were practiced by people *lacking* mathematical ability, eventually, an individual would be reached who would find the greatest difficulty in adding one and one."

An obvious objection at once suggested itself. "If what you say is true, Historian, why is it that different types of humanity have not been produced at will? Why has it not been possible to produce only the desirable types, and eliminate the undesirable? That such has not been the case, is only too evident."

He smiled. "My dear sir, men and women have been in the habit of marrying for love—not for the purpose of creating special kinds of people. How much chance is there that such sequence of events as I have supposed actually would happen? Almost none, which is why genius is so rare. Besides, it is practically impossible to find people who possess the requisite qualities in a pure state. As I said before, a human being is a blend of all kinds of qualities, which mix, and produce every possible variety of combination. It is only once in millions of cases that just the right blend is achieved. Yet, in general terms, the theory is true, which is proved by the fact that certain nations had ability in certain lines—as the Italians for music, the Germans for detail, the Americans for business, and so on. This is possible only upon the assumption that like begets like.

"Although not entirely germane to our subject, an interesting sidelight to this is that the popular superstition of marriages between cousins causing degeneration is entirely unfounded. In itself, the mating of cousins will not affect the mentality of the offspring at all. The danger is that an undesirable family trait, which might be eliminated by an outside marriage with some one who did not have the trait, will be intensified by a union of two people who both possess it. The *similarity*, not the relationship, works the mischief. The same effect would be obtained by the marriage of an unrelated couple who both possessed the particular fault in question.

"However, the opposite is also true. Where the family trait is desirable, the marriage of cousins would be attended by the most beneficial results. A proof of this is furnished by the Ptolemies of Egypt and the Incas of Peru. Both these royal houses practiced marriage between brothers and sisters for generations, and no evil consequences resulted. Of course, prolonged inbreeding may impoverish the stock, as, perhaps, there will not be enough variety in the qualities possessed, but, in general, no harm will follow if the stock is sound in the first place."

"All this is very interesting, Historian," I said, "but

in what way does it bear on your statement that no attempt was made to improve the race?"

"It follows as a matter of course," replied The Historian. "Indeed, although I know such was not the case, considered solely on the evidence, without taking account of motives, it would seem the people of the nineteenth and twentieth centuries deliberately set out to bring about the degeneration of the human race.

"The cry of your day was for larger families—without any consideration whatever of the *kind* of families. Quantity—not quality—was the goal. All sorts and types were encouraged to breed, which the lower and less intelligent elements did in ever increasing numbers, while, at the same time, the better grades, at best a pitiful minority, through a variety of causes, practiced a birth control that was practically race suicide, so far as their particular kind was concerned.

"As if not satisfied with what was already bad enough, a mistaken charity made it possible for all kinds of failures and defectives to reproduce their kind, still further lowering the general standard.

"To this must be added the fact that such few persons of ability as were produced by the lower classes, usually married into the higher walks of life, and there practiced the birth control customary to these classes, which removed even this little leaven of ability from the general multitude.

"Strange to say, science also contributed its mite to the common doom, by inventing machines and other devices that enabled inferior people, who otherwise would have perished in the struggle for existence, to survive and reproduce inferior children.

"So it was. The fit died out by their own choice, while the unfit bred and piled up their mediocre qualities, until society became a pyramid balanced on its apex, the large end representing the ordinary run of small intellectual power, and the small end the few people of ability. Although for a time—a good many centuries, in fact—the mentality of the few bore the burden of the many, and kept the pyramid upright, such a state of things could not continue indefinitely. In this unhappy age, the end has been reached, and the pyramid of civilization topples to its fall."

An Unexpected Culmination

As he brought his melancholy discourse to an end, a most peculiar feeling came over me. I seemed to see The Historian, and the room in which we were, through a veil. Everything looked indistinct and faint, while the ends and edges of objects were blurred and ran together in a way that gave a strong impression of unreality.

To add to my amazement and alarm, I had a sickening sensation of not really being in the room. The mental condition to which I allude is most difficult to describe. My surroundings appeared like the view ordinarily seen in a mirror, only that things were somewhat complicated by my feeling myself to be a part of the mirror. What I mean is that I seemed to be *in* a mirror, looking out on the world.

Before I had much time to speculate on what was the matter with me, a sudden crash, as if the father of all thunder-claps had spoken, sounded in my head. This was followed by complete darkness, accompanied by a feeling of lightness.

I felt as if made of air. I rose—up, up, up—till it appeared impossible there could be such an extent of space in the universe.

Suddenly, I experienced a slight jar. Instantly, the queer sensations left me, and I felt perfectly normal. I opened my eyes, to see if The Historian were still there, and found myself once more *in Professor Melville's laboratory with the professor and Nova bending over me!*

"Are you all right, my boy?" anxiously inquired the scientist. "Nova," he directed, "give me that little bottle on the shelf. No, no—not that one—the third from the end. That's it—let go, I have it."

"Here, drink this," he ordered, handing me a small beaker full of a pale, yellow liquid. "It will brace you up."

"Oh, John!" exclaimed Nova, taking my hand in both of hers, "you can't think how glad I am to have you back and to know the horrid experiment is over! It must have been a success, too, because you did disappear for a moment—or at least, I thought you did!"

"A moment!" I demanded.

"Yes, you certainly did fade from our view for a fraction of time," asserted the professor.

Somewhat bewildered, I rose and walked slowly across the room to look at the clock on the mantel. When I had seated myself in the experimental chair, it had been 3:15. It was now 3:16! Although I had been in the future considerably over twenty-four hours, in their time, in the actual time of today I had been absent *just one minute!*

There is little more to tell. My story is done. At Professor Melville's request, I wrote this account of my adventures. If it is not believed, it matters little to me. I have gained my object, and am to marry Nova in June.

Comment by Publishers for Mr. Marmaduke Jones

THE publishers will express no opinion of the truth or falsity of this astounding tale. It has been presented *verbatim,* as written by Professor Melville and John Woodland. Whether to believe it, or not, is the prerogative of the reader. While we will not go on record as to our own view, we may point out that three explanations of the case are possible.

1. That it actually did happen, and that Professor Melville did transport John Woodland into the future. Against this theory, is the idea that, according to the dictates of common sense, it seems impossible. To this may be added the fact that Professor Melville's explanation of the loss of the element "tempium" (which prevented him *proving* his claim) is very unconvincing.

2. That Professor Melville perpetrated a deliberate hoax, and practically hypnotized young Woodland into believing he had gone into the future. This appears almost as nearly impossible as really to go into the future, while the world-wide reputation and well known integrity of Professor Melville seem to preclude such trickery.

3. That Professor Melville believed it actually happened, but young Woodland, to gain the woman he loved, invented the whole thing. This solution is difficult to accept, because Professor Melville was no easy man to fool, and, from what we know of John Woodland, he was not sufficiently imaginative to originate such an outrageous tale.

THE END.

The Colloidal Nemesis

By Harl Vincent

(*Continued from page* 805)

On the western front it was the same story. Starting at the Rio Grande, the southern end of the lines fell back through New Mexico and Arizona to the Colorado. On the northern end they were gradually swept back through Utah, Idaho, Nevada and western Montana until but a narrow strip along the Pacific coast was held by the enemy. And what a helpless and disorganized shambles the remnants of the Asiatic hosts became! Reduced to a tenth of their previous number, the survivors fought desperately to reach Seattle, Portland, San Francisco and Los Angeles, where their coastal bases were established. They came by truckloads, by trainloads and in fighting planes, transport planes and dirigibles.

In Europe the success of the Allies was as conspicuous and of more immediately terrifying aspect to the Asiatic Alliance, for the radio communication system that connected the Eastern with the Western Hemisphere was disrupted as far as the Asiatics were concerned. Their headquarters in America were destroyed so suddenly that news of the disaster to their forces there had not yet filtered through to the high command, whose headquarters were in Leningrad. But when the Dnieper overflowed its banks and spewed forth the spreading death as far as Moscow, the consciousness of defeat was brought home to the enemy with crushing force. From the Rhine the Germans steadily drove the Asiatics across Belgium and Holland into the North Sea. Italy, Switzerland, France and Spain were soon cleared. From the Black Sea the crawling protoplasm spread quickly northward and southward, crossing the Caucasian Mountains as if they had been ant hills and rapidly reaching and following the Volga far into enemy territory. Turkey and Armenia followed suit and then came the cry for peace. The pleas that came to the Western Alliance would have melted hearts of stone, but there were old scores to settle, and the dreadful carnage continued for another week. Then, on New Year's Day, came the armistice.

* * *

OVERNIGHT the city of Sioux Falls, temporary capital of the United States, became famous. For here there gathered for the Peace Conference the ambassadors of all governments of the civilized world. They came in fast planes, and the municipal airport was quickly crowded to capacity. Accommodations in the city were at a premium and, between the celebration of victory that continued for many days and the influx of visitors from all over the world, the streets took on the appearance of a carnival.

For more than two weeks the members of the Peace Conference occupied their time in the compilation of statistics, and when this work was completed the results were staggering. Of a total world population in 1945 estimated at two and one-half billions, there remained but a scant six hundred million. Of the more than fifty-two million square miles of land, thirty million square miles had been devastated. The final effort of the Western Alliance had accounted for two hundred millions of the Asiatics and the score was somewhat equalized thereby. And wherever the colloidal death had spread and subsided, the ground was barren to the soil, all life in its path having perished to the roots of the trees and of the grass. But the rivers and streams and the lakes had resumed their normal levels, for the elements that had gone to make up the body of the vicious protoplasm were returned to their original combinations with the turning off of the activating rays. The nitrogen was returned to the soil and to the atmosphere—the other elements to their rightful places. But the plant life could never be restored. That would require many years of the kindliness of nature and of the cultivation of man. Meanwhile famine and disease continued to spread their ravages in many countries.

It was a vigorous reconstruction program that was faced by the Conference, and it soon became evident that all talk of reparations was useless. Lasting peace and the opportunity to restore their territories were all that any of the nations could ask for, and, with the balance of power—the Larkin ray—in its possession, the Western Alliance was inclined to be lenient. And so it was that the Treaty of One Hundred Years of Peace was solemnly drawn up and signed. The war was over and only scars remained, scars that would not heal in a generation or more.

The United States of America, reduced from a population of nearly a hundred and fifty millions to hardly more than thirty millions, and with nearly half of its richest territory blackened to desolation, set about with its traditional energy to recover its blasted prosperity. And Homer Larkin was a national idol, an international figure.

Even the erstwhile enemy recognized him as the savior of civilization. And the poor reward bestowed upon the young inventor by his government was, to his mind, entirely too generous. He was given a life position in the Bureau of Research at a salary of six thousand a year and the title of Special Experimental Engineer. Such is the reward of genius.

THE END

The Twenty-First Century Limited

By Paul Slachta

THE author of this story tells it in a manner so natural and realistic that there seems little or no room to doubt its possibility. You are willing to believe, with the author, that interstellar travel is an established fact. The problem now is how to combat certain difficulties and obstructions travelers might meet in the void at certain periods of the year. Also, what will happen when the skies become as congested with air traffic as our streets and roadways are congested with motor traffic now? This is an exceedingly interesting story of future air travel, plus.

"I TELL you, sir," exclaimed Roy Carlton, Chief Pilot of the Interplanetary Express Co., "it can't be done!"

"And why not?" queried the president of the company, Bruce Darway.

"You have received a report from the observatory telling of a certain comet, have you not?" asked Carlton.

"I have—but what has that to do with this run?" questioned Darway.

"Plenty." Carlton walked toward the wall where a terrestrial map was hanging. He took a pencil from his pocket and marked a line from Earth to Venus. "That," he explained, "is the route we take. At 6:30 tomorrow evening that comet will be about 900,000 miles from our route. You know that is uncomfortably close, considering the speed of the comet and the speed we make. If we ever get caught in its gravity pull, Heaven help the poor unfortunates on board!"

"Isn't there a possible chance of cutting ahead of the comet?" asked Darway.

"Only one chance in a thousand. At that place I have my gravity screens wide open and chances are we will be attracted. Usually there are 'pockets' near a body of that sort, places where there is practically nothing. As you know, our power is etheric; we get the power from the surrounding ether, and if we can't get it, we are left to the mercy of that Great Void."

"Perhaps we could start ahead of our schedule—hm—say about two o'clock," suggested Darway.

"Impossible, sir," Carlton answered, "the Round the World Express is due to arrive at 4 A. M., and most of our passengers will be on that plane."

"You're right, but we can't wait any later than 5 o'clock or we are bound to lose that mail contract. We need that badly. The future of this company depends on that contract. We can't rely on the passenger money alone; it's too uncertain. Since we purchased these new planes we have been operating at a loss. What we want is profit and that mail contract will give us profit. Carlton, can't you think of a way out of this?"

"Listen, we have one slim chance to squeeze by that stranger in the heavens and I'm going to take that chance!"

"Attaboy, Carlton, I know you'll make it. Go out and beat that Chicago ship to the contract!"

"By the way, Mr. Darway, what time does the E. & V. send out their ship?"

"Just a minute and I'll see." He went toward the rear wall. A glazed screen, about the size of an ordinary window-pane, was built in the wall. There were two large dials under it, that was all. He worked the dials for a few seconds. Presently a blurred picture was seen on the screen. The dials were turned a little more and then the rival company's station came into view. He manipulated the dials for a while longer until a large bulletin board was seen on the screen. It read:

EARTH AND VENUS EXPRESS CO.
EXPRESS WILL LEAVE CHICAGO 11:55 P. M.
MONDAY, JULY 8TH, 2028
WILL ARRIVE AT VENUS, CITY OF VELENA, AT 2:30 P. M., SATURDAY, JULY 13TH, 2028

After reading it, Darway shut off the power and said, "They have a five-hour start on us. Do you think you can beat them to it?"

"I'll do my best, sir. Our ships are sturdier and have more speed. How many passengers am I taking up?"

."1,100."

"I guess I'll go out and look the ship over."

"Do that, and I wish you luck."

Pilot Roy Carlton walked out.

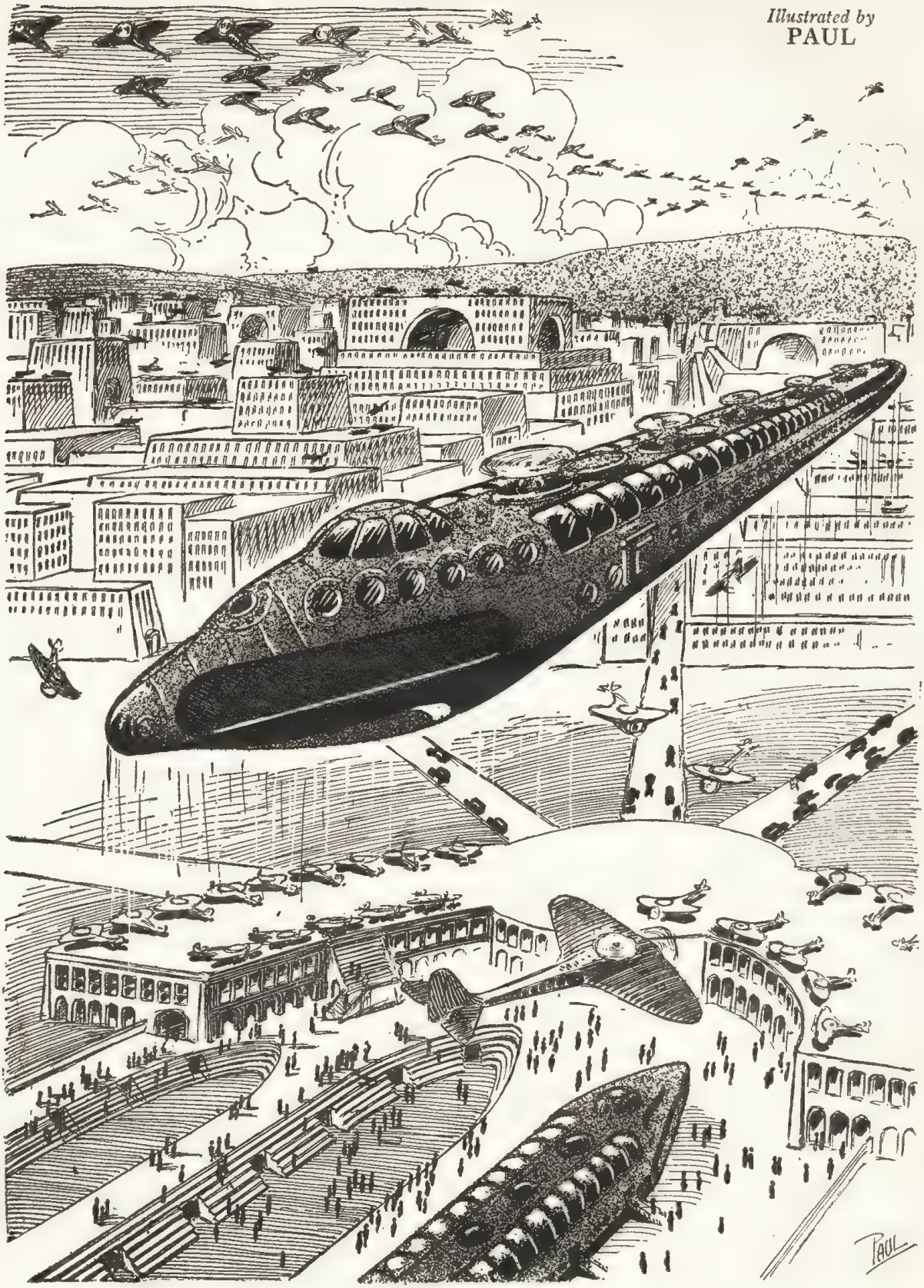
ROY CARLTON and I have been close friends since our boyhood days. In all the time I have known him, he has always been much attracted by the science of aviation. Every opportunity that has presented itself to him, he grasped. Always studied, always crammed his brain with the intricacies of airplane control and its mechanism. It was often that he didn't have his regular school studies prepared, and it is a wonder to me that he finished school with me.

After we graduated, I went to a higher school to complete my studies, while Roy went to the Interplanetary Co. to look for a job.

He was lucky enough to get a laborer's job, doing odd work about the huge airdrome and landing station. Since then, his progress was rapid. Today he is rated the best pilot the company ever had.

Six years ago the company started a regular route between Earth and Venus. The company prospered for a time, until they bought five new ships. From then on the best they could do was to break even. Now they saw their way out of the difficulty.

Illustrated by
PAUL



¶ *The traffic officer in the air stopped the planes and made a lane for the huge ship. It was moving slowly, but surely, the five large screws humming merrily, steadily pulling the now feather-weight ship toward the great adventure.*

Ever since I left college, Roy asked, begged and pleaded with me to make a trip with him. I repeatedly told Roy, "I prefer to stay on Mother Earth." For some reason, I didn't trust those ships. Or, perhaps, I was afraid.

After much coaxing one day, I promised Roy I'd go. Roy had made all arrangements for me, reserved my stateroom and attended to my baggage. Just now I was waiting for him at his apartment.

Roy came in, his features twisted in perplexity.

"What is the matter, old man?" I asked of him.

"W-e-ell," slowly answered Roy, as if in doubt, "this is your first trip and I don't know that I ought to tell you, but I guess I may as well." He put his hands on my shoulders, and looking me straight in the eyes, said, "Paul, we have one chance out of a thousand to get by a comet on the trip we are to make tomorrow."

I stepped back, feeling a sinking sensation in the pit of my stomach.

"Why can't they delay the trip?" I managed to ask.

"Let me explain," Roy answered. "Yesterday the company received a letter from the Postal Department telling us that they would send their mail by the ships of the company that made the best time on this run.

"Our company has invested money in new ships, and as you know, these ships operate between Earth and Venus. Since the purchase of these ships, the company has been operating at a loss, or was just about breaking even. The passenger money, alone, can't meet all the expenses. What we need is some outside source and this source has come, in the guise of a big mail contract.

"Our closest rival is the E. & V. Co. of Chicago. The other two companies are insignificant and need not be taken into consideration. The E. & V. is sending their ship at fifteen minutes of midnight, while we leave at five. They have a five hours start on us—and on that comet. They have——"

"Pardon me, but won't the Postal Department give you credit for that five hours start?"

"No. You see the E. & V. stop on the moon for four hours and a half to pick up passengers. Still they are that much ahead of us."

"I see."

"Well, as I was saying, they have nothing to worry about. They probably haven't given it a second thought. We, however, are scheduled to leave at 5 A. M. and running on our schedule we are due to cross the orbit of the comet at 9 P. M.—45 minutes later, the comet will cross our route at the point where we crossed its orbit."

"You bet it is."

"Here is my only hope. By running the ship as fast as I dare, I might be able to beat the comet to it." He said this with a far-away look in his eyes, as if he were thinking of that fatal meeting. Then turning to me, he said, "I won't press you to make that trip. If you wish it, I will cancel your reservation."

"No, I'll make this trip with you," I answered. It was good to see his face brightening up.

"Come," he said, "let's go to the airdrome and look the ship over."

We walked together toward the station. There was the mighty ship, on the runway, ready to take off in the early morning.

AS we neared the huge plane, my heart began to beat at a faster clip. I didn't know whether I was just scared or thrilled. There it stood, like a huge shadow in the fast failing light, just itching, it seemed to me, to fly away into the unknown.

As we came nearer the ship, shouts and orders came to our ears, baggage men piling in the baggage, a passenger shouting good-by to some of his friends far down below the landing stage. All this left its mark on my mind. With the exception of some of the officials, no one knew that he might be going to his doom, that this might be his last good-by.

All this came to my mind while we walked toward the station in silence. I could distinguish this word, painted in large letters at the forward end of the ship, "VENURTH." The ship was 950 feet long, 400 feet wide, and 200 feet deep. It had a number of decks. On top of the upper deck was a glass-enclosed promenade.

The promenade was like a second Garden of Eden. The flooring of this "garden" was like a huge lawn, with tempting banks here and there for some tired person to rest upon, and forget his troubles. Gravel walks entwined themselves between the many species of trees, ferns and flowers. All the paths led to the center of the promenade where a large lake afforded swimming facilities.

Around the sides were settees placed in such a way that passengers could look at the heavens without any undue strain. Birds, both from Earth and Venus, flitted from limb to limb, singing and making happy without a care in the universe. I couldn't blame them. Amid such surroundings any one could be happy.

At the forward end of this promenade the observatory and instrument rooms were located. The observatory, I found, was a very interesting place, many of the machines and instruments that were in there I had never seen before. All were used for the purpose of observing the heavens for some stray bodies that might come in front of the onward rush of the ship.

The instrument room contained many delicate instruments that showed the speed of the ship, the amount of power used, the distance from the nearest heavenly body, and so forth. In one corner of the room was an instrument that continually drew my attention, because of its oddness. To me it was just an intricate maze of wiring, tubing and coils. Suspended on the wall near this instrument was a glazed screen, marked with very minute lines, running both vertically and horizontally. Near one of those lines was an illuminated dot, the size of a pin-head.

Naturally I was curious as to the use of this instrument, but no opportunity offered itself for inquiring about its function. That it was a very important instrument was obvious at a glance.

All the staterooms were located around the sides of the ship. A short corridor led to the central part of the ship, where the dining room was located. The side doors led to the libraries, music-rooms and lounge-rooms.

One deck was used for the crew's sleeping quarters, the baggage rooms and the great power machines that could make the ship lighter than a feather.

The two upper decks were for the first-class passengers. The grill room and promenade were used by rich and poor, officer and baggage men alike, although the lower class did have some restrictions.

The ship was lighted, heated and cooled on starting by this modern form of power—atomic decomposition. This very same power drove the ship ahead at unheard of speed, and at the same time it purified the air. And it

was this atomic power that operated the gravity screens. two of which were located at the forward end of the ship. Two anti-gravity screens were fixed in the rear. There was one thing I couldn't understand, namely, why did they have five propellers above the promenade? Once I interrupted Roy, in the midst of his explanations and voiced my query.

"You say the ship's power is atomic?"

"Yes."

"Why, then, do you have the propellers on top of the plane?"

"These five propellers," he answered, complacently, "are used to lift the ship out of the atmosphere."

"But I can't see how these screws can even budge a ship this size?"

"We don't rely on the screws alone. You see, we open the anti-gravity screens just enough to make the craft light enough for the screws to move it."

"Why can't you use the gravity screens throughout —from the time you start to the time you land?" I asked.

"The screens move this ship at tremendous speed," his face was all smiles and just beaming sarcasm at me, "and we couldn't very well shoot at 500 miles a minute in this dense atmosphere, with that heavy traffic just above us, could we?"

"Oh, no, not very well." What else could I say?

"You see," he continued to explain, "when we are ready to start, we open gravity screens ever so little, which makes the ship just light enough for the screws to move it; and as I said before, the screws are started and we slowly rise into the atmosphere."

He led the way to the third deck, and to my stateroom. The rooms were very comfortable; every means was used to make its owner feel perfectly restful and at home throughout the voyage.

"Just before we are ready to start, old man, come up to the observation tower and I'll explain more fully how the ship is operated," Roy said.

"I'll do that."

"Well, good night. Try and get some sleep."

With that he left the room.

I WAS awakened by a powerful droning sound. Hurriedly I got up and dressed. While I was dressing the drone came nearer being a shriek. It was just 3:45 A. M. I went to the corridor and looked around, expecting to see the people in a panic. The only person I saw, however, was an officer.

"Where is that noise coming from?" I proceeded to ask that worthy. "Did something go wrong?"

"Nothing wrong. The screens and propellers are being tested."

Although I felt foolish and small, I sighed with relief. Since I was up and wide awake and had nothing to do, I decided to have an early breakfast.

After a good hearty repast, I went to the promenade. The screws had been stopped by this time, and quiet prevailed again.

I met Roy at the observation tower. It was just 4:30. Far down below the passengers were hurrying up the gangplanks, baggage men shouting orders to their help, air taxis arriving and leaving. All was hurry and bustle —just a milling stream of humanity.

Just then I heard a siren and a powerful beam of light fell on the ship. Out in the semi-darkness a huge ship loomed into view. It was built on the same order as the interplanetary ship, only a good deal smaller.

"At last," Roy said, "the Round the World Express is here. Ten minutes late. That means ten precious minutes lost!" He hurried to the instrument room.

I watched the Round the World Express land, its powerful siren screeching its warning, the people hurrying; questions asked and questions answered; the air taxis getting more numerous, and on top of all this the many loud-speakers bawling out their information——

"All aboard for the Venus Express!"

"Venus Express leaving at 5 o'clock. ALL ABOARD!"

Then again came the siren! To me it sounded as if the world were coming to an end. Somehow all this reminded me of a few things my grandfather had told me —of how in his day there was confusion, noise and bustle at the railroad stations; when it was time for a train to arrive or depart. What a difference, I thought.

Just then Roy joined me. "I have given orders to my men to rustle the passengers on board as fast as possible." Then with a smile, he said, "Quite a din, isn't it? It has always been like this; it's human nature to get excited when going on a trip."

At last the time was drawing near. All the passengers were on board, the men were sealing the openings in the sides of the ship, the gangplanks were pulled away, everything was in readiness.

I looked at the clock. It was exactly five minutes to five. The sun was up and lit that confusing scene. The propellers began to spin. Roy was sendings orders——

"Open the anti-gravity screens one-tenth!"

A lever was pulled in place. The gravity screen was partly opened—enough to make the huge ship light enough for the screws to move it,—and we were off!

Across Space

THE ship's powerful siren was screeching its warning to the early morning traffic. All the traffic officers in the air stopped the planes and made a lane for the huge ship. It was moving slowly but surely, the five large screws humming merrily, steadily pulling the new feather-weight ship toward the great adventure.

The traffic in the air was just as stubborn as the automobiles were in the olden days. It was many a time that we just missed hitting a plane, or being hit.

One air-taxi driver tried to cross our lane regardless of the "stop" signal that was against him. The traffic officer sent his plane with a jump toward the taxi, overtook it by clever maneuvering and forced it back to its proper place, to remain there until we had passed.

We continued to rise slowly in this manner for another fifteen minutes. At the end of that time the traffic began to thin out, but our speed wasn't increased in the slightest. We continued in the same, slow, easy climb. We were between 70,000 to 75,000 feet in the air. There was no traffic at this height. Ten minutes later a deep twilight took the place of a bright and sunny day.

The sun, when we left, was the same as usual, except that the deep orange now began to show a reddish tint. Our own earth was like a huge, silver ball, with no sign of land or sea. By this time, complete darkness enveloped our outside surroundings. The atomic lights glowed with a soft luminosity.

The propellers were stopped and drawn in by a clever bit of mechanism, not allowing any of the air to escape into the outside vacuum. Then the ship gave a forward jerk, and I knew the speed was increased.

The darkness bothered me, and I determined to find out just what caused it. I decided to ask Roy immediately.

"What caused everything to grow dark as soon as we left the Earth's atmosphere?"

"You see," answered Roy, "light needs some sort of an agent to diffuse it. In this case it happens to need air with water vesicles and perhaps cosmic dust, to make it visible to us."

"I see."

"Did you ever watch an experiment done with a bell jar? The jar is put on a flat surface; an electric bell is inserted on the inside, and all the cracks are sealed with wax, allowing no air to go either in or out. Then all the air is pumped out from the inside of the jar. When the bell is rung, no one can hear it, although the hammer can be plainly seen hitting against the bell. As soon as the air is let in the bell is heard. The same holds true with light. It needs atmosphere to diffuse it. As we are going through the vacuum now, you won't see any light-beams.

"From now on, you will see the heavenly bodies just as they are. For instance, look at our own sun." I followed the point of his finger, and I beheld a most wondrous sight! It was like a large, fiery ball, aflame in the heavens, its flames reaching high and wide.

Everything seemed to me strangely silent, as though all suddenly went dead. There was not a sound among the other passengers; not a rustle, not a whisper. They merely looked and looked, even as I did, feasting their eyes, their very souls, with this wonderful, this stirring sight!

I was startled by a voice behind me.

"Are you in a trance?" I turned, to face Roy, smiling at me.

"That is a beautiful sight!" I said, still somewhat breathless and overwhelmed.

"Oh, come, snap out of it," Roy said, laughingly, "you will be all used up before the end of this trip. There are stranger sights millions of miles ahead of us. We are bound to see that comet and the sight will completely knock you off your feet."

"Heavens!" I gasped.

"Come, I'll explain more about the gravity screens."

I took a last, lingering look at the skies and followed Roy to the observation tower.

At the tower, Roy immediately began sending orders. He sent signals to the men below, telling them to open the gravity screens at the forward end, one-half, and the rear anti-gravity screens, three-fifths. I waited a second, then the ship gave a forward jerk and I knew its speed was increased.

Roy explained that the forward gravity screens were used to attract the ship to a certain stellar body, which in this instance happened to be Venus, while the screens in the rear were used against the body we were leaving, thereby giving double speed to the ship.

Roy and I went to the instrument room to ascertain the velocity of the ship. After a moment of study, Roy looked up and announced, as calmly as though he were telling me what he had for dinner: "We are now going at the rate of 20,833 1-3 miles per minute, or 1,250,000 miles per hour."

"What!" I exclaimed, incredulously, "1,250,000 miles an hour! What, in the name of Heaven would this ship do with the screens wide open?"

"With the screens wide open, Paul, this ship will gather speed up to 150,000 miles a *second*, just 36,000 miles a second slower than light!"

"But what keeps it from disintegrating? Why doesn't it burn on the spot?" I asked, beginning to lose my breath again.

"It's the metal, boy, a Venerian metal called Durameral metal."

"Some metal."

"Besides," Roy continued, "we are practically in a vacuum, and there is no friction to speak of."

I had calmed down sufficiently to ask Roy a few questions that had been preying on my mind.

"How far is Venus from Earth?"

"Venus, at its closest to Earth, comes within 25,000,000 miles, and at its farthest, 160,000,000 miles, at which time it is on the farthest side from the sun."

"When will we get there?"

"Five days from today."

"I'm going out on the promenade," I said abruptly. "I've got a headache." This was too much for me. Roy stood in the doorway, laughing.

"Just a minute, Paul," I stopped and waited for him. "I have a friend I want you to meet. She's traveling alone and I thought you might make a good traveling companion for her."

We took the elevator to an upper deck. Roy knocked on the doorway, directly across the corridor from my room. We waited a moment, and then the door slowly opened, and there stood before me the most charming girl I had ever met! Her jet-black hair fell in flowing folds about her well-rounded shoulders, and with a delightful touch, a bright red rose was fastened in the hair just above her right ear. Her eyes were like deep, limpid pools of crystal water, shining bright and clear. The eyelashes were like brown satin. She was dressed simply, but in keeping with the mode of the day.

Far away, as in a dream, I heard a voice: "Paul, meet Miss Dana, a very close friend of my wife's."

"Charmed," was all I could say. I guess I spoke the truth at that.

She invited me to take a stroll about the ship. I readily accepted. We went to the music room, doing very little talking on the way. We walked through the spacious dining room to one of the side doors that led to the music room. There we were alone. As we sat down on one of the settees, I wondered how I could begin the conversation. For the life of me I didn't know what to say.

"Aren't these ships wonderful?" she said after a while.

"Er—a—yes." I felt very foolish. As far as conversation was concerned, I was lost. I only wanted to sit there and look at her. I didn't want to talk—I knew of nothing I could say that would interest her.

"Is this your first trip?" she asked again.

"Yes."

After another lapse of silence: "I'll play something for you," and she walked toward one of those funny looking Venus instruments—all wooden blocks and silk strings, which are played by hitting the wooden blocks with the left hand and plucking the strings with the right.

She began playing a soul-stirring Venus melody. The instrument sent out its mellow tones to every corner of the room, hitting the walls and coming back, vibrating through the air, leaving me just shaking.

"You're not much of a talker, are you?" She asked, after she had finished playing that melody.

"Oh, I'm sorry if I proved myself a bore. But your

beauty, your way of doing things sort of—sort—er—dazes me."

She laughed, a tinkling, little laugh.

"I'm glad you think so highly of me," she said, "but I wish you wouldn't speak like that."

"If I have offended you, I'm——"

"No, no, you didn't offend me, but let's not spoil our stroll. Shall we go to the promenade and look at the stars?"

"Surely," I answered, "as this is my first trip, I would naturally like to see some of the passing 'scenery'."

We took the elevator to the promenade. Immediately upon arriving, I looked for the thing that was foremost in my mind—the comet. I searched the heavens. Directly above us was a large, yellow body, which I judged to be what I was looking for. I didn't say anything to Dana.

"Aren't the stars wonderful from this point?" Dana was saying.

"They are wonderful," I said. "I have never seen them from anywhere else except Earth."

"Why did you never go to Venus before?"

"Frankly, I was afraid, but now I'm glad I decided to go—on this trip."

She looked at me, a pink flush mounting to her face.

"Are you going to Venus for a visit?" I asked her.

"I was born on Venus. This was my first visit to Earth. I think I'll return soon, because I like your planet; and besides my best friend lives there."

"Venus must be a beautiful place to live in," I said, looking at her. "It is a wonderful planet."

We picked one of the numerous gravel paths that abounded on the promenade, strolling and chatting about our worlds. This gravel path led to the instrument room, and we decided to stop in and see Roy.

He was busy on his calculations; every once in a while he would study a large chart that hung on the side wall. When we entered, he looked up and his face brightened up immediately. I, alone, knew what was troubling him.

"I see you two are enjoying yourselves," he said, with a know-it-all expression.

"Immensely." Dana beat me to that answer and I began wondering if, after all, she did not like my company.

"How far are we from Earth?" I asked of Roy.

"Well," Roy answered, "we have been traveling for six hours at the rate of 1,250,000 miles an hour. We are now 7,500,000 miles away from Earth."

"This ship is just eating up the miles, isn't it?" Dana said, with twinkling eyes.

"Yes, this is the best and fastest ship the company owns. We will add a little bit more to the rate we are now going at, and get ahead of our schedule—for several reasons," Roy said, giving me a significant look.

"I guess we will go down and get ready for lunch," I said. "I'll come back to see you in a short time, Roy."

I exchanged a few words with Dana at her stateroom, then excusing myself, hurried back to Roy. That large, yellow body was troubling me.

"Isn't that the comet?" I asked, pointing to the yellow body. (It seemed smaller now.)

"No, that's the good, little Earth you just left." I felt myself wilting, then. "There is the comet." He pointed to a little, greenish dot ahead of us and a little to the right. "In a few hours we will know whether we will make it or not."

"Why can't you run the ship at top speed?" I suggested.

"No, we would just be taking another chance. At a speed greater than the rate we are doing now, we wouldn't have much of a chance to get by another body; we would be in a collision before a minute had passed. You see, this section is thick with meteorites."

I looked out through the speed-defying glass and saw the surrounding space thick with both large and small black bodies, hurrying onward. They were in all shapes, I noticed, not the perfectly round "balls" that I supposed them to be, for no reason at all, but flat and oblong bodies, some had large pinnacles sticking out, and some had deep gashes; some were of monstrous size, others were as small as one of Earth's smaller rocks. All floated in the same direction, but with various speeds, according to the size of the body.

"We will meet the comet somewhere on the other side of this meteoric section," Roy was saying.

"I might as well tell you, Roy, that I'm greatly worried about that comet." I said.

"Personally, I doubt what the outcome will be."

"Do you suppose we have a chance?" I asked.

"All I can say, old man, is, that we will do our best. No one can ask any more of me."

"Have you seen anything of the other ships?"

"No, they are millions of miles ahead of us. I'm not worried as to the two smaller companies. We can overtake their ships easily enough. It's that Chicago Company that will give us a fight."

"Cheer up, Roy; this has only started. Many things can happen before this run is over," I said, doing my best to cheer him up.

"You said a good deal, many things might happen before this run is over—" and, after a short pause, "especially to us."

"You shouldn't be talking this way," I told him.

"I know what you are thinking of, Paul. I shouldn't say these things because everything is up to me. I've got to see the humans that are in this ship safely through. But remember this, I'm a human myself and subject to emotions like the rest of you. Deep down in my heart I'm afraid, Paul, afraid, but I must not show it. That is why I stay here. No matter how composed one may seem in the face of danger, deep down in his heart he knows he is afraid."

He wasn't breathless or shaky, as one would expect a person to be after a speech like that. He was smiling and merely explaining.

"That's true enough, but I wish you wouldn't speak like that."

"I'm sorry I let my emotion get the best of me."

"I know just how you feel, Roy, but I am certain in my inner mind that you will see us safely through."

"I appreciate it; and now you had better run down to Dana or she will be raising the dickens," he said laughingly, putting his arm about my shoulders and accompanying me as far as the elevator.

Danger Ahead

DANA was waiting for me. We went to the dining room for lunch. But not for one moment could I erase from my mind the threatening doom that was so swiftly approaching us. Nevertheless I said nothing about it to Dana; I still clung to some hope.

After lunch we took a stroll toward the library, never saying a word to each other. I could think of nothing but the inevitable approach to the comet.

"Are you ill?" Dana was saying, showing some concern. "You are very pale."

"It must be something I ate," I lied.

"I'll go out and order some sort of a stimulant." With that, she walked out.

How I wished I could tell her how much I loved her. And this danger—I did not have the heart to tell her. Still—if she knew, she would be prepared. But Roy had said that there was a possible chance of getting by without alarming any of the passengers, so why frighten her unnecessarily. I decided to keep Roy's secret. At this point Dana came back.

"Dana, if I could only tell you what's on my mind, but I'm afraid—I don't dare to tell it!"

"You must be very ill. Is there anything I can do?"

"No, Dana, there isn't anything you can do, and I'm not ill. There is something preying on my mind."

"Won't you please tell me what is troubling you?"

"Perhaps I will tell you later. Shall we go to the recreation room? It might help me to forget—a little."

"Certainly, if it will help you, but I wish you would tell me."

"Later, perhaps."

In the recreation room, the talk and noise, along with the games that were being played, took the place of the quiet of the library. We played a few games of cards and some deck games, that were introduced from Venus. These few moments of pleasure helped me to forget the fiery body hurtling itself toward us at uncontrollable speed. The time passed quickly in that room.

It was just five o'clock. I asked Dana to come to the promenade with me. I wanted her to be near me the rest of the day.

Roy was in the instrument room, busy on some calculations, his face set and very pale. Every now and then he would stop long enough to give orders to the men at work on the engines.

Then he studied that very same machine that attracted my attention in the earlier part of the day. On the screen I saw two pin-point dots, one was yellow, the other green, slowly moving toward each other at right angles!

I knew the crisis was near at hand!

The Comet

DANA was speaking: "What is the matter, boys; you are acting very strangely?" Roy looked up, surprised, for he didn't know we were there.

"Is there any chance?" I asked, disregarding Dana's query.

"We have lost our one chance of getting by. We are heading straight toward it!" This, to me, was like a giant missile hurled from a gun.

"Is there anything wrong?" again Dana asked, beginning to show alarm.

I led her to the promenade.

"Dearest," I began, resolved to tell her everything, "I love you, have loved you since I first saw you!" She was shrinking. "Do not be frightened, I know very well it is sudden, but we may have only an hour to live!"

From down below came soft music, music that left me shaking; out in the Great Void the serene stars twinkled and burned. They seemed beautiful before, now they seemed a mockery! Again came the music. Oh, I didn't want to die now, I didn't want to die this way! I began to sob.

Dana sat there spellbound, not daring to move. Neither one of us spoke for a long time, then Dana asked with a shaky voice, "What is the matter, dear, did something go wrong with the ship?"

"If it were only that, we might have some chance; let me show you."

I looked in the heavens but could only see those large, fiery stars, always burning—always glowing. I knew none of them was the comet. I led the way across the promenade, and behold, there directly ahead of us, was a large, green body. The COMET!

The head of this comet was misty, probably all gas. A closer observation showed that it was all the colors of the rainbow, blending into one, with green the predominating color. The nucleus was in the center of this coma, and glowed with a greenish tint. Its size was several thousand miles in diameter. The tail stretched away as far as we could see. Probably this was fifteen to twenty million miles in length!

As the comet came nearer and nearer to the sun, the tail kept shying away from it. This was natural, because light exerts a pressure on small particles, which pressure becomes greater in close proximity, and this tail was composed of gas and fine matter that was cast off the head.

Roy knew that we wouldn't be able to head it off, so he decided on a different course. If we continued on our present course we were bound to be in a head-on collision with the nucleus of the comet. Without much ado, Roy changed the course. If he could only make it!

Dana was in my arms, very pale, trying to hide from that hateful scene. We sat down on one of the settees in the instrument room, and waited for our escape or our death.

The comet was now a few hundred thousand miles away. Another five minutes would tell the tale. Closer it came, closer and closer! Now it seemed to cover the whole universe! Closer—closer. It would be all over in a short time. NEARER—nearer! Oh, I didn't want to die, now that I had found my love. No, no! Closer—CLOSER! Frantically I ran toward Roy.

"For God's sake, man, isn't there a chance? Is there no hope? Must we die like common, ordinary—?" a hard lump came to my throat, I could say no more.

"Now, just hold yourself in check, old man, a little while longer. We'll get out of this."

Dana came to me, much more composed than I was. I felt better with her near me.

In the heavens, the green body was very close, nearly covering everything else from view. All the heavens seemed to be on fire, but not with the familiar fire I knew on Earth. This had a strange luminosity of its own. It didn't burn the way we know fire to burn, it just glowed—glowed with a terrible meaning.

"How near are we to that comet?" I managed to ask.

"Just 200,000 miles away. Now you two sit down on that settee, I want to have all this time to myself; just don't worry." He pressed a button, a light flashed, and he turned a small dial.

"Tell the passengers not to worry and prepare them for a hard jolt. How are they acting—as well as could be expected under the circumstances, eh? That's good." He broke the current.

The comet was getting larger—larger. Closer—closer!

A Mad Fight

ROY hurriedly pressed another button, fixing connections with the gravity section on the lower deck. "Open all the forward gravity screens wide open!" A few seconds of waiting, then—it seemed that the ship was going to pieces; it creaked and groaned so! I was knocked to the floor. For a moment I thought we had hit the comet, but it was only the sudden increase of speed. Roy said he wanted to get as much headway as possible. In case of failure to supply enough power for driving her, we could cruise a little way until we came to more power, grab it, and cruise further. It was our only hope.

Suddenly the nose of the ship tilted toward the comet! We had struck one of those "pockets," one of those empty places where there was no power, and we were left without any. The comet beckoned to the ship and it LISTENED!

Then the ship gave a forward lurch, continued in the direction we were first going! She happened to pick up some stray power. We continued to go in this direction for some time. Then again she lurched and hurried toward the comet.

For a half hour after that we lurched and swayed; all the time the ship creaked and groaned. Even in time of danger, my mind was reviewing some of the books I had read, reminding me of how the ancient sea-going ships acted in a gale.

The comet had passed away from us at last; all danger from that source was over, but the tail is dangerous too, for all the particles from the head are cast off to form this tail.

Roy was speaking into the phone again. "Direct the anti-gravity screens on the comet." Then turning to us, he said, "That will be our only chance. If the atomic rays work on the comet, we will be pushed out of this danger."

For a while nothing happened, the ship continued to lurch and move in jerky movements. Our last chance had gone! We were falling into the tail, now below us and a little ahead! It crackled and sparkled, and it, too, had this same strange luminosity of the head!

Suddenly the ship gave a forward jump and straightened, and we were safe! The comet was helping us on our way!

All I could do was to settle, limply, into a nearby settee. Now that the danger was over, the reaction was too great. It hurt me to breathe. Dana sat down beside me. Neither one of us could speak.

Far away, as in a dream I heard Roy speaking, half to himself and half to us, "Whew, but that was close, the closest I ever came to being a nobody." He was himself again.

He looked at his speed indicators and informed us that we were going at the rate of 20,500 miles a minute. "Have her run at 125,000 miles a minute, Daedeck, while I go down and catch some sleep. If anything unusual takes place, call me." Then turning to us, he said: "You two didn't have any supper, did you? Let's go down and have a bite."

It was just 7:10. I took a last look at the comet. It was receding very rapidly. I sighed with relief. Roy looked at me and laughed.

"My boy, we have had to go through other experiences similar to this. I admit, though, that this was the worst I ever passed through. Let's forget it and go down and have a bite."

AFTER a good, hearty meal, we went to the promenade to "work off" the supper. We walked for a half hour along one of the gravel paths bordering a little brook. We talked of many things that would be of no importance to relate. At the end of the half hour, Roy excused himself and retired. Dana and I continued our stroll.

After a few minutes of silence, Dana asked: "How long are you going to stay on Venus?"

"I don't know. Perhaps I'll leave with Roy on his return trip."

"I believe Roy plans to leave a few days after the landing. That will give you only a few days on Venus. Why should you rush back?"

"You wouldn't understand, dear, I must hurry back to Earth as soon as possible. I'll come to see you, Dana, as soon as I can."

"I still don't see why you should leave at all."

"Please, dear, do not be offended; but I must go back."

"If you must, you must, but I'll be lonesome," she sighed.

"Dearest," I said, "when I can take leave of my duties on Earth, 125,000 miles a minute won't be any too fast for me." This was followed by a kiss.

After a few minutes' silence, we continued our interrupted stroll. We stopped by one of the windows and looked out at the majestic stars.

"See if you can find Earth in this maze?" she challenged.

I looked everywhere, but could see nothing that looked like Earth. The stars were in all colors and sizes, from small pin-points to huge brilliant bodies. After looking around and making weak guesses, I gave up.

"See that large, very bright star, toward your right, in that cluster of stars? That is your Earth, the planet we left this morning."

"Impossible!"

"But it's true."

"But I can't see the continents. It seems large enough to show them clearly."

"How can you see the continents through that thick atmosphere? Even a powerful telescope is unable to penetrate it."

"You win again. Where is your little world?"

"We can't see it from here, because it is under the ship."

"Let's go to the stern, and take a look at that comet," I suggested.

The comet still had a long streak, trailing behind it.

"I wonder," mused Dana, "if comets travel in an orbit, or are they wandering strangers, who visit us and seeing that they are not wanted, hurry on, never stopping, just traveling—traveling." She sighed. "Do you suppose they have a set path to travel over?"

"Well, people ages and ages ago thought that comets moved in practically straight lines and wandered through space from star to star. But it has been discovered since then, that comets move in orbits."

"How did they originate?" Dana asked.

"Regarding the origin of comets there has been much theorizing. It seems probable that they are like the meteorites, uncollected fragments of the once great parent body, shattered to pieces in the past ages, from whose parts the members of the Solar System, including the Sun, were formed.

"There was one comet, ages and ages ago, which was seen to split in two, depart from the Sun with two heads,

and return six years later, widely separated. For a few months that comet was not seen again. But a few years later there was a meteor shower just as Earth was passing the track of the lost comet, these meteorites, unquestionably being part of what was left of it."

"My! When I stop to think about such things I feel just a little nobody. Just think how large and inconceivable the universe is!" said she.

"You may be a little nobody in the universe, but you're all the world to me," I laughed.

One Ship Ahead

DURING the following few days, nothing of importance happened. True, the ever changing views kept Dana and me spellbound. We could see numerous comets speeding across the universe in the far, far distance, their tails stretching away in various shapes. We could see the binary stars with perfect clearness. The star clusters were more definite here than when seen through the earth's atmosphere. Then there were the nebulae with all their glory, twirling away in their gaseous envelope. And I must not forget the novae.

At one time, I was watching a race between two comets. The space that intervened between these comets was black; not a star pierced that blackness. Suddenly I could see a small, pin-point light, its hue a bright red. As Dana and I continued to watch it, it grew larger and larger, all the time changing its color. A few minutes had passed; it was the size of a golf ball, and it was now a bright orange in color. A second later, a great flash, a shower of "sparks," and that world was no more. In the light of the flash I could see a dark mass, like a cumulous cloud in close proximity to this particular nova.

While we were thinking over what caused the nova's explosion, I heard my name. I was being paged.

"Here, boy." I called.

"Mr. Carlton wishes to see you in the instrument room, sir—immediately, sir."

Dana and I hurried to the instrument room.

"What's up, old man?" I asked, just a trifle anxious.

"Do you see that light ahead?"

"Yes, what is it?"

"One of the ships from the west."

"Is that all? Gosh, what a scare I had. Well, that's one out of our way, anyway. By the way, what time are we making now?"

"130,000 miles a minute."

'At the rate we are going now, do you suppose we can make Venus in three days?"

"No, but I'm going to try and cut off a few hours by increasing our speed to 145,000 miles a minute."

I laughed. Perhaps my laugh was a trifle wild, but I couldn't help it.

"Did you read, in one of our old books, of the 300 miles an hour the people a century ago used to make?"

"Yes, and how they bragged about it."

"Look," I exclaimed, "we are nearing her. I can almost see her outline!"

In a few seconds we were alongside of the ship, though a mile separated us.

"There are signals, sir," an officer informed Roy.

Roy hurried to the instrument room, while we remained to watch the ship, now falling behind. Meeting fellow travelers in this limitless void was something to talk about.

Roy joined us. "Signals from our fellow travelers," he said.

"Somehow I feel sorry that they didn't have a better chance to win that mail contract," I said, a feeling of loneliness coming over me as we began to lose sight of the ship.

"Oh, I don't know. They sent this message." He handed me a piece of paper, with the following scribbled on it:

Doing fine—Go to It—The other Ship about three hours ahead of you—Luck.—Daeme.

"It's nine o'clock now," I said, "we ought to catch them about midnight."

"We might pass them at a certain point at that time," Roy corrected, "but they may be miles upon miles to either side of us. It was purely luck that we came as close to this one as we did."

The days passed swiftly and we didn't meet any other ship. Nothing unusual had happened that would require relating, in our last few days of traveling.

IT was 12:30 of the day we were to land on Venus. All passengers were collecting their belongings and getting ready to leave their close confinement, and naturally the ship was noisy.

"Do you suppose we have passed that other ship?" I asked Roy.

"Yes. The message we received from the other ship stated, as you know, that it was only three hours ahead of us. Don't you think it's more than likely we overtook it in the last two days?"

"Yes, but what about that Chicago ship?"

"To tell you the truth, Paul, I think that that mail contract is practically lost, as far as we are concerned."

"Surely you didn't give up hope already. More than likely we are ahead of it right now. There is such a thing as getting lost in this black void, you know."

"True, but it's 12:30 now; the Chicago ship is scheduled to arrive at Venella at 2:30, whereas we're scheduled to arrive between 3:30 and 4:00. We are just a few minutes ahead of schedule. In a short time I will be forced to slacken speed.

We have 16,000,000 miles to go, our speed is 150,000 miles a minute; the best we can do. We will have a few million miles more to go at 3:00. You see, we can just land on our schedule time—between 3:30 and 4:00."

"If the Chicago ship is on time, have you lost the contract?"

"Yes."

"Cheer up," I said. "I wouldn't be surprised if they *are* behind us."

"Impossible. If they were behind us, we would have known it by this time."

"You brought your passengers and ship safely through, didn't you? I wouldn't think any more about it, Roy," I said. "It's after one, I must hurry down and get my things ready."

Landing Safely

DANA and I were on the promenade, our last few moments together, studying Venus, now a large, silver ball in the heavens. I couldn't distinguish any continents on that planet, for the simple reason that it was heavily surrounded with the planetary atmosphere filled with clouds. The planet didn't shine as if from a central light; it glowed. The minutes passed by too quickly. It was now 3:35. The ship would be in Vene-

rian atmosphere in a few minutes. We went to the observation tower to watch the landing.

"Close the forward and rear gravity screens!" Roy ordered.

The ship decreased its speed.

"Open the bottom anti-gravity screen, one-half!"

The ship was falling like a piece of tissue paper. Then the propellers were out, ready for instant use. A full minute passed and then—all the heavens began to show a reddish tint, the sun and stars ceased to show their flames, gradually, and later, to lose them completely. The stars, one by one, disappeared, until not one was seen in the sky. The sun began to glow as I have seen it glow when on the earth. It was full daylight! We were in the atmosphere of Venus! The propellers began to spin.

The traffic was just as thick here as it was on earth. The ship's siren began its cry of warning, and in a short time a lane was formed through the thick traffic, allowing the ship to pass on down.

I was much interested in the view that was before me. The landscape rolled away into the distance, to a large, dark-green mass, that was known as the Forest Region. From this region long, white highways traversed the whole planet.

The buildings were of the purest white stone, delicately put in place to make beautiful designs on the sides. Almost every building had an opening in the center forming beautiful courts, heavy in shrubbery, flowers and trees. Some had a small brook running across this court!

I asked where the E. & V. Company Station was located. I had hoped against hope that I wouldn't see their ship lying at rest. But my hopes were in vain, for there was the ship as complacent as ever.

We had lost the mail contract! After our hard work, the danger we had passed through, the hurrying and worrying—all for this? I don't wonder that Roy was dejected.

The ship continued to float downward through the thick traffic. A few minutes had passed, and the ship was about to touch the soil! The screws above us whined and we slowed up perceptibly, and then, just the slightest jar, and I knew we had LANDED! !

I walked down the gangplank, with Dana at my side, and then, for the first time in my life, my foot touched the soil of another planet.

Roy joined us a few minutes later, feeling downcast, now that the trip was over, knowing that he had lost that which would have put his company on its "feet."

The ship from Chicago had landed a half hour ahead of their schedule—just 16 minutes after 2.

"I must report at the office," Roy said. "Would you two care to come with me?" We consented.

An Unexpected Wind-up

I EXPECTED to see the manager much disturbed and disappointed and was surprised to see him all smiles. As soon as we appeared, he rose and extended his hand to Roy. We all looked on in wonder.

"Allow me to present Mr. Halloway, of the Postal Department."

I turned in amazement, for I didn't know anyone else was in the office besides the manager.

"Allow me to offer my congratulations," he said.

"I don't know what you mean?" Roy mumbled.

"Just this—we will award the mail contract to your company."

"B-but——"

"I know what you are going to say. No, the Chicago company didn't win."

"But they landed a half hour ahead of their schedule."

"As I understand it, they had almost clear going all the way, while you were detained, not only detained, but pulled far off your course by that comet, thereby losing almost three hours. In spite of this detention, you managed to arrive on time. That is the kind of men we want to carry the mail."

"Yes, but didn't the Chicago company cut an hour off their schedule?"

"True, but you would have cut off at least three hours. I know what you had to put up with, for I happened to be a passenger on your ship without your knowing it. Again allow me to congratulate you."

"This means that the company can keep on going," the manager said.

Roy was a changed man.

"The president of the company has announced, that if you should happen to win that contract, he would send out an expedition to Mars, to find out if it would be practical to open a passenger route. Would you care to head that expedition, Roy?"

"Would I? I'll say I would!"

"We will send you out the latter part of this year. You have the pick of the crew, and you can take anyone else you want to take with you. In other words, we will leave everything up to you."

"Thank you," Roy said, simply.

"You can make arrangements with the president on your return to Earth."

The manager took his place at the desk, and we knew the interview was at an end. We stepped out into the wonderful Venerian atmosphere.

"Would you and Dana care to go with me on that exploring trip?"

"I certainly would," I answered. "Would you, Dana?"

"If Roy doesn't think I'd be 'excess baggage' I'll go," she answered with a smile.

"Then it's all settled," Roy said. "We will make arrangements later on."

I SPENT three wonderful days on Venus with Dana, then the time for the return trip came.

I was standing near the gangplank, talking to Dana just a few minutes before the take-off.

"When we are ready to leave on that expedition, I'll come for you, dear. Perhaps we can arrange to stop on this wonderful planet before we depart for the 'Unknown.' You will wait for me, won't you, dear?"

"All my life."

Then I was ready for that long voyage back to Earth.

THE END

The Secret KINGDOM

By Allen S. and Otis Adelbert Kline

Part III

In these concluding chapters, the authors wind up, in a thoroughly fitting manner, the two preceding instalments. Questions that are introduced in the earlier part are adequately answered here and the depiction of the Inca civilization in the light of archeology and ethnology is colorful and most satisfactory. We are sure you will be glad to hear from the Messrs. Kline again soon.

WHAT WENT BEFORE

AFTER Bell, scientist, detailed by the Society for Biological Research, in search of hitherto unknown species of plants, animals, birds and insects in the great, forbidding Brazilian wilderness, is being hounded by a German, posing as a scientist, who has an American companion and a company of Indian guides.

Tumba, Bell's Indian guide, is continually on the lookout for the enemy, and having disposed of one or two of the German spies, comes back to inform Bell that there is no food.

Going further into the wilderness, in search of fresh food, Bell comes barely in time to shoot a female cougar as she was prepared to jump on the back of a spectacularly dressed man who was binding the feet of her struggling cub which he had made captive. At the sound of the rifle shot, the stranger's bodyguard rushes forward, just in time to round up the enemy in the act of plundering Bell's boxes of precious collections. The Inca—Bell soon learns that the stranger is the Inca of a hidden kingdom—takes Bell and Tumba back to his kingdom, where Bell is made a curaca or nobleman and installed in state. He learns something of the history of the kingdom, and meets Nona Flores, also a stranger in the Kingdom, and realizes that the High Priest, Tupac, for some unaccountable reason, harbors a vindictive feeling against him. Also, six of the loveliest maidens of the Kingdom are offered to Bell as his brides, which offer he feels it expedient to accept, at least for the time being.

Tupac sees in Bell a formidable rival for the hand of Nona Flores and does everything in his power—in an underhand manner, of course—to blot Bell out of existence. Among other things, he engages the services of Ripac, who, before his match with Bell, was champion wrestler of the Secret Kingdom, to do away with Bell. When all other plans fail, Bell is thrust into the den of a boa constrictor and left to the mercies of this hungry reptile.

CHAPTER XVI

Work for the Royal Embalmers

THE instant that Bell was pushed into the den by the High Priest's retainers, the snake struck. Instinctively he swerved aside, but the sharp fangs ripped his clothing. This gave him an idea—and he stood in dire need of rapid, timely thinking. Quickly whipping off his mantle, he ran into a corner and held it before him.

The boa struck again with lightning-like quickness, clamping down its terrible jaws on the bundled woolen garment. Being only a reptile, and endowed with the meager intelligence of its kind, it no doubt imagined that the cloth was part of the man. It forthwith attempted, as boas do in cases of this kind, to twine its body about that of its intended victim.

This piece of strategy, however, was not easily executed. Bell had crouched in the corner in such a manner that the menacing coils could not encircle him. Nevertheless, he knew this sort of thing couldn't last—that it was up to him to think even faster and work yet more swiftly, if he were to remain much longer in the land of the living.

He cast fleeting glances about the room. Yellow lamplight filtered in through a small barred window at the opposite end. The opening was about six feet above the floor. The desperate captive saw his opportunity. A terrible risk—a slim chance to succeed; but hope was rekindled.

He trusted his hold on the cloak to one hand. With the other, he worked feverishly to uncoil the rope from about his body. This task was fraught with extreme difficulties. The serpent tugged incessantly at the cloth, meanwhile trying to enfold its anticipated repast.

At length the rope was free. Fortunately there was a loop at one end of it. Without this device, the whole plan of escape from the boa would have been next to worthless. Tupac's hard-pressed prisoner could scarcely have fashioned one at that vital moment.

He doubled the tough strands through the loop, making a running noose. Then, by shifting his grip on the mantle from one hand to the other, he was able to slip the noose along. Finally it circled the neck of the boa.

Bell proposed to pass the free end of the rope around one of the window bars and draw the snake up to it. How to avoid the crushing coils while crossing the room was the perplexing question. At length the loose folds of his cloak offered a solution.

He suddenly spread them over the boa's head and leaped for the window. Then, passing the end of his lasso behind one of the heavy bars, he pulled with all his might. Writhing, twisting, turning, struggling, the

They pushed the first one over and watched breathlessly till the cloth opened out and retarded its fall.

monster's head was dragged upward until the angry jaws, in their frenzied snapping, smote upon iron.

Bell stood at the opposite end of the room, barely out of reach of the lashing body, and threw his whole weight on the rope. He could only guess at the outcome; in fact, he was of the opinion that many times his strength, applied as in the present circumstances, would be required in doing this monster to death. If only there were some fixed object on his side of the cell, to which the rope could be attached! But there was no such help to be had.

Minutes passed. Not for an instant did the contortions of the serpent abate. Bell's muscles quivered, as much from excitement as from the tremendous strain. Cold sweat oozed from his armpits and ran down his sides. Yet, he was utterly unaware of these bodily reactions, so firmly was his mind set upon one objective. "Hold fast! Pull hard. . . harder!" Perhaps he uttered the words between labored inhalations, as he breathed the close, unsavory air of the boa's den.

Apprehension came suddenly. Might there be a weak place in the rope? Jagged rocks at the edge of the cliff . . . the impact of a keen blade seeking his heart—what havoc had been wrought by these?

Snap!—the ominous sound made by a strand parting under tension. If that should be repeated once, maybe twice. . . Well, the scaly horror's swallowing apparatus was still out of range. No reason for borrowing more trouble. The fibers held, while time seemed cumbered with leaden feet.

Was it possible? Unless fatigue had played a prank on him, thought Bell, the titanic convulsions were becoming measurably less violent. This impression gained strength, and finally became a certainty. The improbable was happening—the quenching of this gigantic, loathsome reptile's tireless energies by strangulation.

Fifteen minutes more, and only an occasional tremor announced that the stubborn life had not yet forsaken its abode. The scientist edged forward cautiously, not permitting the rope to slacken, and trod on the constrictor's tail. Strenuous lashings of the great body followed all too quickly. He was obliged to leap back in order to avoid a stunning blow.

Quiet again, after a short period of ebbing vigor. Bell, in his mental relief, became conscious of the aches and cramps in his arms. The endurance of his grasping muscles had nearly reached its limit. At the same time, his last experience had taught him that the choking pressure of the noose could not be lessened with safety. Unceasing vigilance must be maintained.

He managed to give the free rope end a couple of turns around his body; then tied it in front of him. This expedient served, whereas it would have been fatal to make such an attempt during the earlier part of the battle with the serpent. By leaning back with all his weight, the man was able to keep the head of his captive pressed against the iron bars, thus freeing his hands for relaxation which was long overdue.

It was a full half-hour later when he again tried the experiment of stepping on the boa's tail, this time without apparent effect. Satisfied that the monster was dead, he lowered its inert bulk to the floor and removed the noose.

Bell had just lain down to rest and to reflect on the further barriers to his escape from Tupac's dungeons, when he heard someone approaching along the corridor. He sprang to his feet noiselessly and stationed himself at the den's entrance, holding the lasso in position for instant use. The sound of footsteps ceased. Followed silence, as of one listening intently.

A key rattled in the lock, the door slid open and Ripac's gloating face appeared. The rope was around his neck in an instant, and he was jerked inside. He reached for his sword, but a crushing blow on the point of the jaw caused his hand to drop limply to his side. Another, and his knees sagged under him. It was a clean knock-out.

Bell removed the rope from the thick neck and coiled it about his own body as formerly. He then made spoil of the unconscious curaca's sword and put on his belt, also claiming a short knife which protruded from his clothing. Thus accoutred, he stepped outside and closed the sliding door. Having locked it as an extra precaution, he stole cautiously down the hallway.

"When he comes to, Ripac will have more congenial company than I had," he thought. "A dead boa certainly makes a more agreeable companion than a live one."

To his surprise, he met no one in the passageway. Following it, he found a door at the end which he believed might lead to freedom. It was locked. Disappointed, he turned to retrace his steps, then thought of Ripac's keys. He tried them all, and the very last one turned the bolt. Outside was the street and liberty.

He carefully locked the door after him and looked about for a hiding place. Night had passed and a new day had advanced to afternoon during his stay in the house of horror just quitted. It would be the part of wisdom to avoid encounters with any of Tupac's men.

Across the way were the Botanical Gardens, the pride of the Inca. In them he had a collection of trees, shrubs, vines and flowers from almost every continent on the globe. Directly opposite Bell stood a huge specimen of the banyan, covering almost a quarter of an acre of ground. With its multitude of aerial roots or trunks set closely together and its heavy foliage, it offered an ideal place of concealment. He crossed the street without attracting notice, and had soon penetrated the labyrinth to a point where even the sharpest eyes could not discover him.

Many soldiers passed his hiding place that day, and he rightly guessed that they were searching for him. What he did not know was that they were seeking him as friends and not as enemies.

Back in the room from which Bell had miraculously escaped, a scene was being enacted the thought of which would have filled him with horror. The boa, which he had left for dead, was apparently coming to life. The man, also, showed some signs of returning consciousness. The reptile was both very angry and very hungry. It was not accustomed to such rough treatment as had just been administered. Moreover, an unwonted period of fasting had followed the latest feat of deglutition. The tip of its tail whirred menacingly against the floor. Then the great body coiled for a spring, just as the man sat up and looked about him.

A half hour later the serpent, with jaws agape and throat distended to three times its normal size, was slowly swallowing the crushed and mangled remains of what had once been the High Priest's most trusted and most bloodthirsty agent of vengeance.

Bell remained in his place of concealment until nightfall. As soon as the sheltering cloak of darkness enveloped the gardens, he made for the cave that had been Nona's refuge.

He found that the provisions had scarcely been touched. There was also a good supply of water in the skins. It was obvious, however, that he could not remain in hiding in the cavern. The rope, if left hanging, would betray his presence. If fastened with a slipknot, untied by means of a small attached cord after descending and hauled into the cave, it would remove his sole means of egress.

Had he been aware of the Inca's attitude, Bell would have returned to his home; but, believing that everyone in the city had turned against him and that he would surely be executed if apprehended, he quite naturally resolved to keep out of sight. Where to go—that was the question.

He thought of the banyan tree, but rejected that possibility. Sooner or later he would be discovered there by one of the Inca's gardeners. True, the Botanical Gardens were near the palace, and he might overhear a word or two about Nona. Anxiety concerning her fate was never out of his mind, and he pondered this phase of the matter at length. Finally, however, he decided that he could do her no good, with every hand against him, even though he should gain knowledge of her whereabouts.

After a few trips up and down the rope, he drew it up after him, shouldered the skin of water and bundle of provisions which he had secured and set out, he knew not whither.

He had gone but a short distance when he came to an open space in the center of which, looming dark against a background of starlit sky, was a mound about twenty-five feet in height. It was on his own property and easily recognized as the tomb of the curacas who had preceded him as lords of the estate. Other occupations had thus far prevented an exploration of its interior, although Quizta had given him a brief description.

"An ideal hiding place," he thought. "Surely it will not occur to anyone to look for me here."

He circled about until he located the entrance, which was reached by descending a flight of stone steps. The place was honeycombed with narrow galleries running at right angles to each other, and he stumbled over the mummy cases which protruded here and there from niches in the walls. After hurting his shins two or three times, he lighted a match and made his way to the far end of the tomb, the sound of his footsteps reverberating through the corridors and returning weird, uncanny echoes. The air was damp and musty and pervaded by that strange odor common to burial vaults. To the present visitor, this feature was reminiscent of the Catacombs.

Bell attacked with gusto the food he had brought along, as he had not eaten a thing for more than twenty-four hours. After a hearty meal, he lay down on the cold floor and was soon asleep.

The following day he spent in exploring the various underground galleries and examining the curious mummy cases. The bodies had evidently been embalmed in a sitting posture, and the cases were shaped to conform to this. On the front of each case was carved an image, also in a sitting posture. The niches that held them were not cut deeply into the walls, in consequence of which the lower parts, on which were carved the feet and limbs of the images, projected out into the room. It was on these objects that he had tripped so many times the night before.

He did not venture beyond the doorway during the entire day, resolving to stay there until his supply of provisions should run out, then make a nocturnal trip to the cave for more. . .

WHEN the Inca returned to the palace that morning, he sent for his chief embalmer.

"Take five men with you to the house of the Villac Vmu," he said. "Kill the boa which has swallowed the white curaca, remove the remains and prepare them for burial. The funeral will be held this evening." He turned to Nona, who was sobbing on the shoulder of the Coya. "It is the most we can do for our departed friend, for whom we had intended a much happier fate and who was most deserving of one."

"Your Majesty is most kind," she replied, controlling herself. "Indeed, the least we can do is to give him decent burial."

"He shall have no less a funeral than any of our greatest nobles, and we shall personally accompany him to his last resting place."

When the royal embalmers opened the body of the boa, they found that which was to some degree the semblance of a man. The identity of the mangled remains, in view of the reports current in New Cuzco, they had no reason to question.

CHAPTER XVII

The Funeral

AS soon as it became dark that evening, Bell ventured out of his hiding place for the purpose of gathering some grass. His bones ached from sleeping on the bare floor the previous night, and it was his desire to provide himself with a softer couch. He was about to enter the tomb with the last armful when he heard strains of weird, barbaric music not a great distance away. Looking in the direction of the sounds, he saw a procession of people coming toward him, their way lighted at regular intervals by torch bearers. He immediately plunged into the entrance and ran to the corner in which he had made his bed.

"Perhaps they are after me," he thought. "But no, that cannot be. They would not seek a fugitive with torches and a band. It must be a celebration of some sort. They will soon pass."

Contrary to his expectations, however, the sounds grew louder, indicating that the procession was approaching the tomb. He saw a flicker of light in the doorway. A moment later two torch bearers entered and the music ceased. Immediately behind the torch bearers were six men, burdened with a mummy case similar to those which Bell had observed that day. After them came the Inca in his gorgeous golden sedan, borne on the shoulders of ten stalwart men. The High Priest walked at one side of the litter and the Commander of the Royal Guard at the other. Next came Nona, accompanying the Coya; then Bell's six wives, Inca nobles, curacas and a mixed assemblage of the common people. The women filled the air with cries, groans and lamentations. There seemed to be a general contest among them to decide which could wail the loudest and longest.

"No doubt it is the funeral of some noble," thought Bell. "But why should they bury him in *my* mausoleum? This is strange."

The cortege stopped at a niche, not thirty feet from his hiding place, and the mummy case was lowered to the

floor. As the bearers moved it into place the mourners redoubled their cries, tom-toms thundered deafeningly in the low-vaulted tomb and wind instruments shrieked their wild ululations.

The High Priest now advanced to a place directly in front of the mummy case and held up his hand for silence. Immediately all noise was hushed. He then delivered a long speech in the Inca tongue, most of which was intelligible to Bell. The Villac Vmu made no mention of the name of the departed, but faced the mummy case and addressed his remarks directly to the image carved on its front. Mostly, they were eulogistic in nature and spoken to the soul of the deceased, whom he characterized as "noble Curaca, generous master, dutiful husband, brave and loyal citizen." He concluded with a ritualistic chant, the tenor of which was to pray for peace and happiness for the soul in its new environment.

A number of slaves now came forward, led by Tumba. They carried choice fruits, meats, pastries and wine. These were placed at either side of the mummy case.

"My slaves in on it, too," meditated Bell. "I wonder if they have taken some corpse for mine and think they are burying me."

His doubts were set at rest the next instant, for as soon as the High Priest retired he saw Nona come forward unsteadily and kneel before the mummy case. Her eyes were red with weeping. The pallor of her face and the droop of her shoulder testified of a bereavement that induced the very limits of grief. She crossed herself and said a prayer for his soul.

Ah, the prayer of that pure, sweet girl for the man to whom her love had been given. So deeply stirred was Bell that mingled affection and sympathy prompted him to end the pitiful scene at once. He felt that he must reveal himself to Nona, take her in his arms and utter the assurance that he still lived. But no, he dared not disclose himself to this crowd, where his foes probably outnumbered his friends. Besides, this abrupt method might work serious harm to nerves already overwrought. Early tomorrow—that was it. He would have the interim in which to plan a suitable way to deliver the tidings.

The prayer finished, Nona rose unsteadily and the Coya, moved by the girl's convulsive sobbing, placed a motherly arm about her.

Bell's six wives now came forward. Mirim, acting as spokesman for them all, addressed the Inca.

"If Your Majesty will permit, we shall accompany our beloved husband on his long journey to the land of the hereafter," she said.

"As we have previously stated, we do not approve of this obsolete custom," replied the Inca. "However, it has been our policy not to interfere with those who really desire to accompany their loved ones to the hereafter. That privilege is yours if you request it. You may perform the ceremony, Tupac."

The High Priest presented himself, a half-smile playing on his horrible features. This was work after his own butcher's heart. He drew a long knife from his girdle and turned back his sleeves. The six girls took places before the mummy case.

Bell now felt that he must make himself known, and was about to step out of his hiding place when Nona ran to the Inca and knelt at his feet.

"Please, Your Majesty, do not let them do this horrible thing," she implored. "I have heard you say many times that you considered the custom revolting and barbarous. Why not put a stop to it now, once and for all?"

The Inca hesitated. Tupac, however, did not. He had been ordered to proceed with a ceremony which was very much to his liking, and he meant to carry out the instructions with finesse. He seized Mirim by her long, black hair and raised his weapon. Huayna Capac, perceiving the hasty maneuver, raised his hand.

"Hold, Tupac!" he commanded. "Be not so abrupt. Release the girl."

The High Priest drew back, glowering like a wild beast just cheated of its prey. The monarch paid him no heed, turning to address the six girls.

"Youth is ever hot-blooded, headstrong and rash," he said. "We find no exception in this case, nor had we anticipated one. You have held the cup of matrimonial joy to your lips for a brief moment, only to have it rudely snatched away and returned brimming with sorrow. We sympathize with you fully in your bereavement, but would not have you, on the impulse of the moment, take a final step into that dark unknown from which there is no returning. You are but children, unversed in the wisdom which time and experience bring. Because these lessons have yet to be learned, you feel that this burden of grief is more than you can bear. Reflect for seven days on the serious nature of the act which you were about to perform. If at the end of that time you still wish to die at the bier of your beloved departed, come to us and your desire shall be fulfilled. We have spoken."

There came a spontaneous shout of applause from the multitude, unrebuked, despite its seeming lack of respect for the deceased; then a chorus of cries: "The Inca has spoken. All glory to the Inca."

Huayna Capac made a sign to his litter bearers. As they raised the magnificent sedan to their shoulders, everyone knelt along the walls to do the sovereign honor in passing. As soon as the Inca had reached the entrance the crowd closed in behind, and in a few moments Bell was left alone in the tomb.

"So I am officially dead and buried," he mused, walking forward to examine his alleged likeness carved on the mummy case wherein his body was thought to be contained. A torch sputtered at either side of the case, and on the floor reposed the gifts of food and wine.

"The viands intended for my departed spirit will be most acceptable to its very much animated shell," he thought.

Bending over, he selected some choice fruit and a bottle of wine. He was about to remove these to his corner, thinking it unwise to remain long within the circle of light shed by the torches, when he heard the sound of footsteps at the entrance. Someone was descending the stairs. It was too late to run to his hiding place now. Acting on the impulse of the moment, he pulled the heavy mummy case out a little way from the wall and slid behind it.

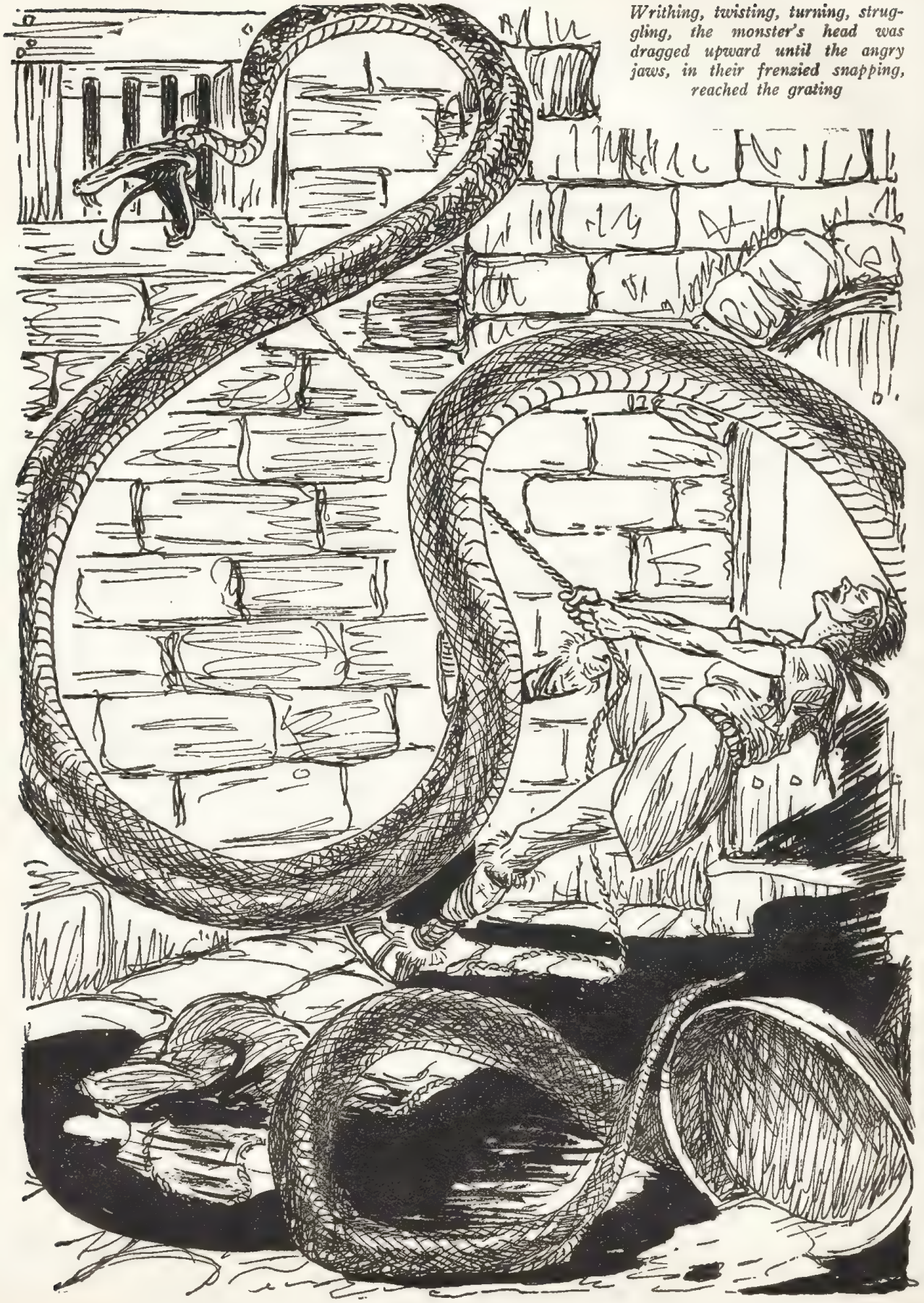
CHAPTER XVIII

In the Tomb of the Curacas

FROM his place of concealment behind the ornate case Bell heard the voice of Tupac.

"They should be here in a short time now, Mopah," he said. "They promised to return as soon as they could slip away from the procession undetected."

"But does your lordship intend to kill them in defiance of the Inca's order?" inquired the other anxiously.



Writhing, twisting, turning, struggling, the monster's head was dragged upward until the angry jaws, in their frenzied snapping, reached the grating

"Mopah, I am surprised at your thick-headedness. If Ripac were here, I am sure he would show more intelligence. Of course I am not going to kill them. They will come here, expecting to die at the bier of their husband, but I have planned a much sweeter destiny for them. Go now, and keep your men out of sight until the girls have entered the doorway. Then post them at the entrance and await my orders."

Bell heard the footsteps of the departing Mopah and waited breathlessly. Presently the voices of the girls became audible, and as soon as he knew that they were standing in front of his mummy case he peered cautiously out.

Tupac was standing before them, a sardonic grin on his evil face. Mirim was the first to speak.

"We are ready for the ceremony, your lordship," she said.

The grin of the High Priest broadened perceptibly.

"You, Mirim, and the others are much too young and beautiful to die," he replied. "No doubt you would prefer a living lover to a dead husband. Come with me. I will hide you in my house and surround you with every luxury. You will be honored by the love of the second man in the kingdom, second only to the Inca himself."

Tzuki, the girl standing next to Mirim, had by this time noticed the disarray of the food offering.

"Look!" she exclaimed. "Someone has gathered up some of the fruit and a bottle of wine."

"The spirit of our beloved husband has returned," cried Mirim.

"He must be here in the room with us now," said Loya. "See! The little house of wood has been moved."

All of them began to show signs of nervousness, not excepting the High Priest himself, for he was even more superstitious than the rest, if not quite so ignorant. He did not wish to appear cowardly before the girls, however, so tried to put on a bold front.

"Do not be afraid of any spirits," he blustered. "I have here a potent charm, against which the power of Cupay himself has been directed in vain. It drives disembodied spirits immediately to the outer realm where they belong."

He produced a small, grotesque stone image from an inner fold of his garments and waved it before the mummy case, muttering incantations.

"Will your lordship proceed with the ceremony?" quavered Tzuki. "We are passing through a great ordeal and would end the agony quickly."

"As I tried to make plain to you a moment ago, there will be no ceremony. Do you think I would dare do this thing in direct opposition to the command of the Inca? Hardly. You are coming home with me now. It is useless for you to try to escape. My men are waiting at the entrance."

"Can it be possible that the promise of the Villac Vmu is so lightly held?" asked Mirim. "Then give us the knife. If you are so faint-hearted, we will perform your duty for you."

She snatched the sacrificial stone knife from his girdle but Tupac wrenched it savagely from her.

"Enough of this," he said gruffly. "Will you come peaceably or shall I call my men?"

BELL wondered if the High Priest were really superstitious. The thing would be worth trying, anyway, for he must now interfere by one means or another. The dissembling scoundrel had just seized Mirim and Tzuki by the arms, while the others cowered together, a frightened little group.

"Tupac!"

The sepulchral tones echoed uncannily from every recess of the vaulted chamber. The Villac Vmu turned toward the mummy case in astonishment.

"Who calls me?" he asked.

"The white curaca calls you."

"There is someone hiding in the place. It is a trick. You cannot fool me."

"If you think I am trying to fool you, open the mummy case."

The High Priest began to tremble violently. He dropped the arms of the two frightened girls, who joined the others. They huddled together yet more closely as if for mutual protection.

"Open this little wooden house of the dead. Then stand before me, you coward. Miserable, trembling dog of iniquity, your blood is turning to water at this moment. You dare not remove the lid and face me."

Tupac felt impelled to flee, but his feet seemed rooted to the floor.

"What? Are your knees still smiting one another? My patience nears its end. Think you that I am powerless to come forth of my own accord? I will demonstrate for you. Show off that famous valor before the ladies. Wave your little image and mutter your incantations. These may avail you against Cupay, but they cannot save you from me. I can kill you where you stand if I so desire, and I have a good mind to do so."

This threat was too much for Tupac. He turned and bolted for the door, shrieking "A ghost! Save me! It is the ghost of the white curaca!"

Bell leaped from his hiding place and followed swiftly. Overtaking the High Priest in a few strides, he prodded the wretch ungently with his sword. At this the frightened man fairly flew across the floor.

When Mopah and his companions heard the cries of their master and saw that he was hotly pursued by the Curaca whose burial they had recently witnessed, they stopped for no second glance, but rushed pellmell in the opposite direction as fast as their legs would carry them. It was an utter rout. As Mopah said afterward, no man could fight a ghost, and a ghost armed with a sword was doubly to be feared.

The scientist turned back from the doorway, convulsed with laughter. The girls had disappeared.

"Where can they have gone?" he wondered; then called softly, "Mirim."

There was no reply.

"Answer me, Mirim. Do not be afraid."

He heard a slight rustle in a dark niche at his left.

"Oh, spirit of our beloved husband, do not harm us. We would have joined you ere this, but were prevented by the Inca and tricked by the Villac Vmu. Be not angry with us."

Bell walked swiftly to the spot from whence the voice came and gently drew the shrinking girls one by one from the dark corner in which they had sought concealment.

"I am not angry with you, and please do not address me as a disembodied spirit. I am not only very much alive, but ravenously hungry. Let us go home and ascertain what the cook has left from dinner."

They could scarcely believe the evidence of their senses. He had touched them, talked to them and declared himself alive. It must be so. A miracle, no doubt, but was he not manifestly superior to other men?

'Among his belongings, Bell had found material from which to rig a crude stomach pump. He put this instrument into use at once and had soon extracted the greater part of the brown liquid from the girl's stomach

It was but a short walk to the house. After a welcome meal, during which the solicitous "Sextette" tenderly pressed all manner of dainties upon him, Bell retired to his room and sent for Tumba.

The joy of the astonished servant knew no bounds when he beheld his master; for he, in common with everyone else, had fully believed him dead. To Tumba's anxious inquiries regarding his health, Bell replied that the shallow chest wound inflicted by one of his irate captors on the night of the ambush now troubled him but little. The Indian then related in rapid, guttural sentences, colored with picturesque profanity gleaned from several languages and dialects, the events which he knew would interest the escaped prisoner—his own rescue of Nona and their flight to the palace; the search for Bell by the Inca's men; and its termination in the den of the boa, where circumstances had quite naturally led them to believe him the victim of Ripac's stupidity.

It was all quite clear to the scientist now. The snake which he had left for dead had come to life and swallowed the High Priest's dastardly aide. When he should put in an appearance on the morrow the Inca and his followers would believe him miraculously risen from the dead. Such an impression would increase Tupac's fear of him. His fame would spread quickly throughout the kingdom. It would not be necessary either to affirm or to deny anything. In fact, it was quite evident that these superstitious people would be more ready to believe that he had come to life after being swallowed by the boa and his remains embalmed and buried than to accept his story of having choked the reptile and escaped. Bell resolved that he would share his secret with one more person only—Nona.

AFTER instructing Tumba when to be silent, talkative or mysteriously reticent, he dismissed the loyal fellow and waited in his chamber for an hour or more. When the excitement of the household had subsided, and after all had been quiet for some time, he stole out and went alone to the tomb of the Curacas.

His first care was to remove all traces of his sojourn in the place. During his previous examination of the tomb he had noticed a mummy case which appeared to be two or three centuries old at the very least. He now opened this case and found, as he had expected, that the corpse it had originally contained was dried and shrunken to a mere skeleton. The bones easily fell apart when he prodded them with his sword, and he crowded them together at the foot of the box. He then transferred the swathed and bandaged remains of Ripac to the ancient receptacle and carefully replaced both lids. This done, he returned to the house unnoticed and retired.

Immediately after breakfast next morning Bell set out for the palace. Arriving at Nona's door, he knocked in gentle lover's fashion. There was no response. He knocked again more loudly, then tried the door. It gave way easily.

Nona lay across the bed. Her outspread hands gripped the coverlet and her head hung slightly over the edge, so that her long, glorious hair cascaded to the floor, a mass of shimmering gold. Her eyes were closed and her slightly parted lips, naturally a brilliant scarlet, had taken on an ashen hue.

Horrified, Bell rushed over and took the slight, limp form in his arms.

"Nona," he cried. "Nona, can't you hear me?"

There was no reply—no answering movement of form or feature.

"My God!" he exclaimed. "It cannot be—it must not be that she is dead."

At that moment his clutching fingers came in contact with a small empty bottle which lay on the cover. Trembling with apprehension, he picked it up and examined it. He found the remnants of a dark-brown liquid of some sort, which gave forth a pungent, sickening odor.

Poison! A torrent of remorse engulfed him. Why had he not gone to her when he had felt impelled to do so the night before? Why had he senselessly delayed telling her of his escape from the boa, when he might have known that every added moment of suspense would increase her anguish? Why had it not occurred to him that she would seek a release like this, rather than endure the shame which Tupac would be free to force upon her, now that she believed her protector to be gone forever? She was dead—dead; and he was her murderer.

Presently he began to reason more clearly. Her body was still warm, so she must have taken the poison only a short time before he had entered. While he was not acquainted with the nature of the draught, it might be possible to save her life by acting promptly. He stepped out into the hall and hailed a passing servant, whom he instructed to inform the Coya at once of what had happened. Then he started for his home on the run.

Bell returned to Nona's suite just thirty minutes later. The Inca, his Coya and a number of courtiers were in the room where the tragic event had occurred. All except the monarch seemed greatly surprised and awed at seeing the white curaca, although the rumor of his return from the tomb had spread apace. The Inca must have shared the feelings of the others, but as usual his features were immobile.

Among his belongings, Bell had found material from which to rig a crude stomach pump. He put this instrument into use at once, and had soon extracted the greater part of the brown liquid from the girl's stomach. He next administered a powerful drug, which he hoped might counteract the effect of the poison, and followed this by vigorous massaging in an effort to restore circulation.

Tupac put in a belated appearance, seeming less arrogant than usual, but adding to the tenseness of the situation by the impression of sinister power which attended him always.

CHAPTER XIX

The Judgment of the Inca

AFTER a short time, the Inca dismissed the tearful Coya and the curious nobles. Only he and the Villac Vmu remained to keep vigil with Bell.

The American worked feverishly for another half hour, then pressed his head against the girl's breast to listen for a heartbeat. A faint stirring of the pulse sent him to work with redoubled energy. Rising, he encountered the gaze of Tupac. Where awe had been but shortly before, he now saw vindictiveness once more struggling for a place. But the High Priest might as well have been at the other end of the earth for all he mattered to Bell at that moment.

Thus far no one had spoken to the scientist. When he had taken command of the situation and issued orders to them, the result had been a gaping silence which had nearly driven him frantic. Then the Inca had repeated the orders, to receive instant obedience; but even Huayna Capac had as yet addressed no word directly to the white curaca, apparently bound in a measure by the spell of superstition which held the others dumb.

Now, however, he asked a question in the same placid tones that he always used.

"Noble Curaca, does Nona Flores still live?"

"The heart beats . . . a little. . . . Hands less cold. . . . Yes, she is still alive," Bell answered, without ceasing his labors.

"Our humble thanks to the great Lord Sun, who looks on us with favor this day."

Tupac, also, found voice. Going to the great open window, he stretched out his hands toward the sun, palms up, and chanted a prayer or hymn of some sort to the great luminary, pausing now and then to throw kisses to his god.

At length Bell realized that he had done all that lay within his power, and sat down to anxious waiting. The others, too, hovered over the girl, watching for signs of returning consciousness. She lay as quietly as before, save for an occasional slight rise and fall of her bosom, which indicated that the breath of life was struggling to return.

Toward midday a servant entered with a tray of food and drink, deposited it and quietly withdrew. Tupac poured himself a great goblet of wine and gulped it down, returning at once to the bedside. Bell and the Inca, if they noticed the circumstance at all, gave it no heed.

Busy with his own thoughts, the American did not see the occasional looks which the two aborigines bent upon him. Both were studying him, the Inca in his self-contained way, Tupac with every emotion mirrored in his face. They were still somewhat in awe of him because of his supposed return from the grave, and his great magic in restoring signs of life to Nona tended to augment this feeling.

But Tupac was jealous to the core of his black heart. This newcomer—this white devil with his uncanny powers—was threatening him. His fame as a magician and a great healer stood in imminent danger of eclipse.

So his anxiety for Nona was not unmitigated by other considerations. His was not a nature which could be genuinely concerned about anybody, without the ever-present motive of personal advantage.

Thus they kept vigil, while the day wore slowly to its close. Bell's haggard face and tightly clenched jaws attested the terrible suspense he suffered. The Inca was a shade paler than ordinarily, but gave no other outward evidence of strain. Tupac paced the floor at intervals, returning to the tray until the wine was gone, while his looks grew darker and more forbidding with every passing hour.

Nona's personal attendant came in at dusk, walking with noiseless tread, and lighted the wick in a shallow metal oil lamp. Placing it on a table at the side of the bed, she took her quiet departure. Nona moved slightly, sighed and turned her head a little on the pillow. Instantly the watchers gathered round more closely, Bell at the head of the bed on the side next the window, the Inca on the other side and Tupac at the foot.

She breathed more strongly, regularly, and the color slowly returned to her face. After an interval she opened her eyes, but appeared not to note her surround-

ings. Then a faint cry of horror escaped her lips as she saw the hideous face of the High Priest, fully revealed by the yellow light, leering down at her. Desperation seemed to give her a surge of strength, and she made a convulsive movement to cast herself out of the open window.

Instead, she found herself grasped by strong arms. Eager lips pressed against her cheek and she heard her name murmured over and over by a beloved voice.

BELL became coherent at last.

"It is I, Nona, with you in flesh and blood."

"You. . . . Oh! I thought—I was sure—you were . . . dead."

He smoothed her pillow and gently placed her head back upon it.

"You must not bother about the details. I am alive and well, and when you are rested—"

"But they buried you. I attended—"

"I have returned from the tomb. Another time I will tell you about it. Won't you rest now?"

She held out her arms.

"Hold me close. I want to be sure."

There was no denying this request.

Tupac had been watching with baleful eyes, his talon-like hands working. As Bell and Nona embraced, he reached for his dagger and crouched to spring.

The Inca stayed him with a gesture.

"Will Your Majesty allow this shameful scene to continue?" he shouted. "Must I remind Your Majesty that this woman is betrothed to me?"

Bell released Nona and stood up.

"I have saved her life," he said, "and I claim her for my own."

"Let there be no disputing," said the Inca calmly. "It is our wish that justice be done to all. Thus do we rule our people. The noble Villac Vmu has a prior claim on this damsel, in that he bespoke her hand in marriage long before the white curaca's arrival in New Cuzco. The law of the land—the Inca's word—is also on his side."

A brief, tense silence ensued.

"Noble Curaca, your claim to this woman by reason of having saved her life fails to do you honor. Remember that she also saved your life. Any man in the kingdom would have done as much for her, had he been able. Your interest in each other arises out of the similarity of your positions here, and is increased by your close racial kindred. But both of you are under the necessity of bowing to the customs and usages of this land in which you shall always dwell. Death is the only alternative."

They were mute. What was there to say? There was no misunderstanding the Inca's tone.

"To all appearances, Nona Flores is now out of danger," continued the Inca. "The Coya will care for her during her convalescence. She shall have the signal honor of marrying the second man in the kingdom. And you, noble Curaca, are possessed of lands, wealth and wives. Return to your estate and be content. Both of you will serve your own best interests by keeping to your separate ways in the future.

"We have spoken."

"The Inca has spoken. All glory to the Inca," said they all; but Tupac's harsh voice was loud and triumphant, while the acclaim of the other two was barely audible.

CHAPTER XX

Hair-Face Again

"TODAY, if your lordship wishes, we shall converse about the art of healing."

"Very well, Quizta. I shall first discuss the plagues of the tropics and what I have learned concerning their treatment."

He proceeded, with occasional interruptions from the amauta.

"The vowel is pronounced more broadly. . . . The accent is on the last syllable. . . . This word expresses the shade of meaning better. . . ."

Their daily lessons had taken the form of discourses by the scientist on various subjects at any convenient hour, entirely in the Inca tongue, with Quizta listening attentively. They agreed that Bell might most effectively test his vocabulary and knowledge of the structure of the language by covering a wide range of topics.

After talking steadily for some time, the American confessed that he had about exhausted his knowledge concerning the scourges most feared by dwellers below the equator.

"My lord, your progress has been remarkable," exclaimed Quizta. "It is only in minor points that your speech needs polishing, and there remain but a few of these, since your lordship requires instruction in a given matter but once."

"I apprehend that you are flattering me again, good teacher. However, now that I have aired my meager knowledge of the theme proposed by you, let me ask you a question along the same line. You are acquainted with the circumstances under which I parted, two weeks ago, from the lady that heals. I—"

"Your pardon, my lord, but it were better not to mention—"

Bell interrupted in his turn.

"Quizta, you are a good and loyal friend to me. Had I not unquestioned proof of that fact, think you I would speak her name in your presence? I have performed my civic duties for a fortnight, never once seeing or hearing a word about Nona Flores. What does our little world say concerning her?"

"She goes about ministering to the sick as before, my lord," said the amauta reluctantly and in a low voice. "Some say that her countenance is wan, her expression sad . . . and that she grows thinner daily. Yet she seems possessed of unbounded energy and pours out her strength without stint in the service of our people."

"I had feared as much," said Bell gravely.

He sat in troubled thought for some time while Quizta, sympathetic yet apprehensive, waited in silence. At length the scientist roused himself and spoke. His words brought an expression of relief to the face of the native.

"I must away to the morning audience. Are you going toward the city, Quizta?"

They traveled the well-kept highway at a rapid pace, each too thoroughly engrossed in his own meditations to care for conversation. When they had penetrated the city almost to the palace grounds, the amauta tugged at Bell's sleeve.

"My lord is indeed pondering deeply that he does not heed the commotion in the street," he said.

The scientist looked in the direction of the bedlam of sound which till that moment had failed to attract his attention. A milling, shouting crowd of New Cuzcans

pressed about a squad of the Inca's soldiers, who, with drawn swords, obliged them to make way. Looking closely, Bell saw in the midst of the guards two men in the clothing of civilization, one of them thickset and heavily bearded, the other tall, lanky and awkward. Their faces and hands were deeply tanned by the tropical sun, but their features were undoubtedly those of white men. They bore no visible weapons, and two of the soldiers carried extra rifles slung over their shoulders and a brace of holstered automatics apiece were attached to their girdles.

The soldiers conducted their unresisting prisoners to the palace gates, where the royal guard held back the rabble and allowed the party to pass through. No doubt they were going to the audience chamber, thought Bell, and hastened to follow. Curiosity would have prompted him at any time to observe the drama attendant upon the reception of outsiders by the stately Inca. On this occasion, however, the growing certainty that he knew these men—that they were the leaders of the party which had so nearly brought his expedition to an end along the Amazon—urged him to miss no part of the proceedings. As he dogged the heels of the soldiers, these thoughts kept pounding away in his mind:

"Are they indeed my murderous foes? If so, what then? How can I be content to act the part of a spectator only?"

WHEN he had stationed himself among the Curacas in the great hall, the newcomers had already been equipped with burdens and caused to kneel before the throne of the Inca. At that moment the tense silence was broken by the monarch's voice, addressed to the leader of the soldiers in the native tongue.

"Lupo, how came these strangers to New Cuzco?"

"We surprised them, Your Majesty, with a large party of Caribs, all heavily armed, prowling about near the foot of the mountain."

"We shall trouble you, white men," said the Inca in Spanish, "to disclose your names and the nature of your business. Arise."

Both men got to their feet, and he of the beard suavely assumed the rôle of spokesman.

"Your Majesty," said he in a rich, oily voice, "I infer that we have been brought before the king of this mountain, though I have not understood what was just said."

The Inca nodded and bade him proceed.

"My name is von Steinberg and my companion's name is Smith. We are secret service operatives in the employ of the United States Government, Your Majesty, and for many months we have been following a desperate criminal, a fugitive from justice. We are at peace with all men except him we are pursuing, but as determined officers we are to be turned aside by nothing except overwhelming odds. When the trail of our quarry led us to this lonely country and up to the very foot of the mountain, we were greatly puzzled how to proceed. Then a large party of Your Majesty's soldiers set upon us fiercely and, completely surprised, we were obliged to surrender or die."

"We do not wonder at your surprise," said the Inca. "You say you are in the employ of the United States Government?"

"Yes, Your Majesty," replied von Steinberg, squaring his shoulders and throwing out his great chest.

"Señor Smith, you have not yet spoken."

"I am an American, Your Majesty," he replied in a drawling, high-pitched voice, tugging at his stringy mustache and averting his eyes.

"There spoke the proud but unthinking citizen of the United States," observed Huayna Capac. "Are there not two Americas? And who can claim the title of 'American' more justly than the Indian, the original inhabitant of these continents?"

They eyed him in amazement, having no doubt taken him for a deeply bronzed white man.

"But as to your mission?" resumed the Inca. "What is the name of the man you seek?"

"He had assumed the name of Bell, Your Majesty, when last we heard of him," answered the bearded man.

As the white curaca's name was pronounced by this stranger, there was a great craning of necks and all eyes sought him out among the nobles. He leaped to his feet, amazed at the colossal lie, and faced his accusers with flashing eyes. Thus singled out, he was recognized at once by the two newcomers. The lanky man, whose drawl had proclaimed him unmistakably a Yankee to Bell, displayed his teeth in a broad grin. Von Steinberg's countenance lighted up with malignant triumph.

What weight would the words of these impostors have with Huayna Capac? Would the Inca turn him over to this villainous pair? The scientist gazed intently at the placid face for some indication of the monarch's attitude.

CHAPTER XXI

New Alliances

THE Inca motioned to Bell to present himself before the throne, which he did in the customary humble manner. Bidden to arise, he looked in vain for a sign that Huayna Capac either believed or disbelieved the brazen falsehood of von Steinberg.

"Noble Curaca, you have heard the accusations of these strangers, namely that you are a criminal, a fugitive from justice, and have assumed the name by which we know you. How much of this is true?"

"Your Majesty," replied Bell, striving to control his indignation out of deference to the Inca, yet speaking somewhat hotly in spite of himself, "the charge is in every particular a deliberate, preposterous lie. This thing of arrogance and effrontery has claimed that they are secret service operatives. Let them produce their credentials."

"You have heard," said Huayna Capac, turning to the newcomers. "Prove to us now that you have spoken truth."

"Ah, Your Majesty," returned von Steinberg in silken tones, "our word of honor must stand unsupported in this matter. We had the great misfortune to lose the strongbox containing our official papers when one of our boats was wrecked in a storm on the Amazon."

"Another brazen lie," said Bell sternly. "Your Majesty, I doubt whether this von Steinberg is even a citizen of the United States."

"Enough of conflicting statements, in the absence of evidence on either side," said the Inca. "We owe a debt to the noble Curaca Bell, and we shall repay it with our continued confidence. To you, O strangers, New Cuzco is indebted for nothing save the rude disturbance of its tranquillity. You have come with words of peace in your mouths, and in peace you shall remain.

"Know that strangers, once they have learned of the existence of our kingdom, are never permitted to depart.

Unless you prove unworthy, you will be received as citizens of the middle class, occupying a house consistent with your station in life. We shall allow two weeks for the choice of suitable occupations. There are agriculture, herding, building and craftsmanship from which to select.

"Your Caribs will be sold at public auction, as all Caribs are slaves in New Cuzco. They are the hereditary enemies of our people and cannot be accepted in our society on any footing save that of serfs.

"Position among us, as well as advancement in favor, depend upon industry and loyalty. Depart." To the leader of the band of soldiers he said in the Inca tongue: "Conduct them to a house in the merchants' quarter, Lupo. We have spoken."

The chamber resounded as the leal subjects of the Inca echoed his words.

Tupac had been an interested watcher and listener from the moment of the strangers' arrival. Their statements had filled him with exultation, in that they were inimical to Bell. Here were possible allies. Accordingly, as soon as the audience was over, he hurried to his house and dispatched a messenger to make verbal request that the bearded man visit his home at once. Von Steinberg returned with the High Priest's servant so promptly as to indicate that either fear or eagerness to please had endowed his beefy person with nimbleness.

Showing his guest to a comfortable seat in a richly furnished room, the Indian got to his point at once.

"I am Tupac, Villac Vmu of New Cuzco—that is, High Priest of the temple of our Lord Sun—second only, in power and authority, to the Inca himself."

"What's that?" asked von Steinberg, startled out of his stolidity.

"Ah, so I have imparted some information. The identity of our sovereign is a surprise to you. Well, we shall talk of that later. I have asked you here because I believe we may be able to reach an agreement which will be pleasant to both of us. You are an enemy of this man named Bell?"

"If I could just get these hands on him!" exclaimed the other, holding out his enormous paws.

"Well spoken, and I should enjoy seeing it. He is my enemy also, for reasons which I need not disclose at this time. Now, señor, regarding this secret service matter"—Tupac eyed his guest shrewdly—"I have ascertained by divination the exact amount of confidence to be accorded your claims."

VON STEINBERG was amazed—manifestly so; and the high Priest congratulated himself inwardly for the cleverness of his guesswork. He allowed the silence to reach a proper tenseness before resuming:

"It is unnecessary, however, that others should know while we remain on the present good terms. But to the matter in hand. The Inca has assigned you and Señor Smith to the laboring class. I will provide you leisure, luxury, any pleasures you desire, if you will place yourselves at my disposal in only one respect—to work with me against this white devil, Bell."

"It shall be a bargain, but I should like to name certain conditions. What is the fellow's situation here in New Cuzco?"

"For saving the life of the Inca from a wild beast, he has been made a curaca or adopted foreign noble. Come."

He led von Steinberg to a window and pointed out Bell's distant villa.

"There he lives, with servants, wives and an abundance of treasure."

The bearded man's eyes glinted with avarice.

"These are the conditions of our otherwise willing service—for I am sure that my friend will agree: I must have this treasure. I must also gain possession of certain papers which he has and some boxes. Finally, Señor Smith and I must be helped to escape from this mountain. In exchange for your aid in all these things, we will work with and for you against this evil man. But especially must I have the papers and urgently must I escape from this place. Do you agree to my conditions?"

"Willingly," said the High Priest cordially, hiding his contempt behind a smile. "Get Señor Smith and take residence in my house at once."

When von Steinberg had departed, Tupac rubbed his hands together in huge satisfaction with himself. This great beast of a man would easily do away with Bell, but he would blunder, no doubt, and fail to cover up his tracks. That would be well. The Inca would have him executed, thus saving Tupac the slight embarrassment of disposing of a troublesome and too exacting ally.

CHAPTER XXII

"Hell Hath No Fury—"

LEAVING the palace at the close of the morning audience, Bell stood for a moment on the broad steps and let his gaze wander over the beauties of the royal gardens. They enticed him, for he was greatly in need of the ample space and comparative solitude which they offered. He wanted to walk on and on. Perhaps the activity would clear his mind for an effective struggle with the new problems which faced him.

Moving along a broad, winding path in the welcome shade of the thick-foliaged trees that bordered it, he negotiated a sharp curve and almost collided with Nona Flores.

"Oh! Señor Bell . . . you frightened me," she said breathlessly, placing a hand over her heart.

"Nona! I'm sorry . . . and again I'm glad."

He glanced around and, seeing no one, took her in his arms in a brief embrace.

"You shouldn't risk that," said she, returning his kiss nevertheless.

"I just had to do it." He released her. "I've been hungry for a sight of you."

"I have longed to see you, too, and now my desire has been fulfilled." She pressed her fingers to her lips. "And I shall treasure the memory of this meeting always."

"Nona, dear girl, your voice sounds like the knell of doom. Why so hopeless? The national marriage day is almost a year off. We are both alive and well—though I have learned that you are endangering your health by overwork. Are you fearful that this scheming devil, Tupac, will actually be able to win over us in our game of wits and wiles? Since the Inca delivered his ultimatum at your bedside, my one determination has been to prove him wrong. That we will do—aren't you sure of it?"

"Yes, when I am with you it is easier. But after that dreadful evening when I awoke to find the Villac Vmu bending over me—and then the terrible, cold finality in the Inca's voice—it has seemed that my fate is sealed. I cannot escape the feeling that I must await the blow like a dumb beast under the knife."

She shuddered at the too-perfect simile, reminiscent as it was of the High Priest's bloody rites and of that ruthless cruelty so characteristic of the man. Bell sought to rally her with bantering words, though it tore his heart to summon them. She at length attempted a response to his simulated gayety, but her first light sentence ended in a flood of tears.

He waited for them to subside, for a gardener had put in an appearance, so that he could not offer her even the meager comfort of weeping on his shoulder.

They sought a bench beside a shaded pool and tried most earnestly to think of some way of escape from the mountain. Failing in this, they remembered that Bell had a story to relate about his escape from the boa and the happenings at the tomb. He told it as briefly as he might, after which they avoided reference to the greater peril which neither could quite forget—that concerned their lives' happiness. They talked and talked—of the outside world, of friends and acquaintances in far-away places, of books and folklore, medicine and biological science—meanwhile falling, if possible, more hopelessly in love with each other than ever.

"By the way," said Bell in a matter-of-fact tone, as he noted the near approach of evening, "two strangers were brought into the audience chamber today. Said they were Americans. Captured with their Caribs by a party of the Inca's men."

He had been trying to tell her this for an hour past, but had not decided till that moment how to impart the news without alarming her. He was determined that she should not know the new danger which threatened him.

"Oh, I am sorry for them. But for you it will help to relieve the monotony, with two fellow country men here bringing news of current happenings out there." She made a sweeping gesture which included every point of the compass.

"Yes, that is true," he said with feigned enthusiasm. "I'll have to go now, dear. See how long the shadows are growing?"

She walked part of the way with him, and when they came to the turning of the path where they had met, her affectionate good-bye was uttered in tones which thrilled with renewed hope.

BELL slowly made his way home in the sunset afterglow, mechanically passed through the motions of eating dinner and went to see that his specimen cases were securely locked. He was apprehensive about the safety of their contents, particularly the manuscripts; but soon the anxiety for Nona's welfare which colored his every waking moment crowded the consideration of even his priceless scientist's possessions from his mind.

Altogether it was a gloomy evening and a slow one to pass. He retired as early as he decently could, but sleep seemed out of the question. He lay wide-eyed and quiet in the dark room, formulating and rejecting plan after plan. Schemes to thwart his enemies, even to attack them openly, raced through his mind; but, chiefly, his ponderings centered upon modes of escape from New Cuzco with the girl of his heart.

A slight sound in the room set his ragged-edged nerves tingling. Listening intently, he was sure he could hear someone cautiously approaching. He slid noiselessly to the floor on the opposite side, crouching there for a moment. The almost inaudible slithering of stealthy feet continued.

There came the sound of a sudden spring and of a knife ripping through the mattress where Bell had lain a few seconds before. He pounced on the would-be assassin, searching swiftly for his knife hand. Finding it, he gave the thick wrist a sudden, powerful wrench and the weapon clattered on the floor.

The man was bulky and strong, but slow in his movements. The antagonists threshed about, colliding with articles of furniture and occasionally bringing up against a wall with a thud. Bell at length succeeded in holding one of his opponent's flailing fists in a steely grasp which rendered it harmless, while with his free hand he sought for a throat grip. Heavy blows in the face and body failed to deter him in the least. His fingers encountered a thickly bearded chin.

He knew of but one bearded man in New Cuzco. The realization of his enemy's identity sent him to work with fresh energy. Von Steinberg was panting laboriously by this time, and emitting guttural curses with the scant breath he yet possessed. Strain as he might, he could not elude those terrible fingers which would soon throttle him completely.

Just then Bell stumbled and lost his hold. Though he regained his feet in a trice, fear had lent wings to the other's scurrying heels. The scientist reached the open window a second too late. The cool night air had the effect of recalling him from thoughts of vengeance to lucid reasoning, and he was obliged to own himself baffled. It would be useless to follow in the darkness.

A commotion from below stairs claimed his attention. Seizing his sword, which, had he been able to reach it, might have given another aspect to the recent fray, he hurried down to investigate. He found Tumba and several of his servants bending over a prostrate figure. The long, lank body and the drooping mustache told him at a glance that it was the Yankee, Smith, who had taken the count.

"What's this, Tumba?" he demanded.

"He try open box," said the stoical Indian. "Me hit um on back of head."

A broken stool lying on the floor told Bell that the blow had been anything but a gentle one.

"Good boy," he said and turned his attention to Smith.

The hard-headed Yankee was coming to. Before long he sat up weakly and reclined against a specimen case, his eyes full of defiance.

"Smith," said the scientist in United States—it felt a little strange to his tongue—"I'm keenly disappointed in you. What are you about, anyway, lining yourself up with a cutthroat like von Steinberg? Hell, I won't own you for a fellow citizen—the sneaking ally of a thief and assassin!"

"All right, bluster away. By crackies, you come near bein' funny." He felt his head gingerly. "I was just out, and I'm still down, and you've got the upper hand. But durned if I won't call you what you are, and you can take it or leave it. You're a dirty, low-down robber."

"Say, you're still out of your head."

"Ha! If you'll steal, you'll lie. You know damned well you stole them specimens and manuscripts from von Steinberg while he was buyin' passage on the river boat at Para. You ain't got a thing on me. I'm anything but proud to say we hail from the same country."

"You poor, deluded idiot. Those specimens have all been collected, at great risk and with much hardship, through my own toil. The manuscripts are all penned by my own hand. You are the prince of dumb-bells to believe such childish falsehoods."

"Say, I'll forget the things you called me if you'll look me in the eye, man to man, and say the rest of that again."

"I repeat, then," said Bell, meeting his steady gaze, "on my word of honor as a gentleman and as a true and loyal citizen of the United States, that I myself collected those specimens, every one, and wrote those manuscripts, every word, in the interests of science and for the benefit of my own country."

Tumba had been standing by his master, listening patiently to the colloquy between the white men. He had noticed Bell's disheveled appearance and there was a question he wanted to ask which could wait no longer.

"Hair-Face come your room?" he asked.

"Yes, Tumba, he did."

"You get um?"

"No, I stumbled and he jumped out the window."

"Me get um," said the Indian, and started for the door.

"Here, you can't go after him now. He's safely hidden by this time. Stay here with me."

"Damn!" said Tumba.

The Yankee rose unsteadily to his feet.

"'Damn' is right," he said. "He's prob'bly havin' a powwow with the High Priest this minute. Hair-Face and pie-face—that's good."

"I might have known Tupac would sign him up," remarked Bell.

"Ain't I the prime bonehead, to hook up with two carrion crows like them when there's a he-man around to tie to? Yes, by cripes, I believe you. Short of help around here? I'm your general handy man if you say the word, and here's what says so."

He held out his hand and Bell gripped it warmly.

"Fine!" he said. "I couldn't wish for anything better."

TUPAC awaited the return of his fellow plotters. He was hoping for good news, yet not at all certain of receiving it. The accursed white curaca had not been set upon by any of his men since that strange return from the tomb. What supernatural powers might he still possess? The happenings in connection with this affair the Villac Vmu had not seen fit to mention to von Steinberg and Smith, fearing the effect on their courage which might result.

He had just finished listening to the report of a spy, and the tidings had thrown him into one of his darkest moods. He had learned that, although the most thorough search had been made, Ripac was nowhere to be found; also that Bell's sarcophagus was empty. The superstition born and bred in the High Priest struggled against his stubborn conviction that all had not been right with the spirit scene at the white Curaca's tomb. That any human being might have escaped the terrible boa did not enter into his thoughts. If Ripac would only come out of hiding, or at least make his whereabouts known!

He took to pacing the floor, and his servants, after one look at his face, were at pains to avoid him. Approaching footsteps in the hall caused him to pause expectantly. Von Steinberg brushed past the guard and entered. His face was scratched and battered and his clothing torn. Labored breathing told that he had been running.

"Where is the white Curaca?" demanded Tupac anxiously.

"Asleep in his bed, for all I know. Gosh! He fights like a wildcat. I am lucky to be here."

"Pah! I took you for a brave man."

This was too much for the fellow's vanity, and he disposed of it in characteristic fashion.

"So? What would you have done if three men, all armed, had sprung upon you? The devil had two guards hiding in his chamber."

Tupac raged and stormed about the room, shouting and cursing like one demented. There came a timid knock at the door. He strode over and flung it open. One of the assistant palace gardeners, a spy in his employ, entered nervously.

"Well, Amayu, what is it? Speak."

"My lord, I have tidings. I worked rather late in the gardens of the Inca this evening, and observed Nona Flores and the white curaca lingering by the pool of Huascar Yupanqui. At the same time I marked that Morea, daughter of the noble Caxamarka, was watching them from behind some shrubbery, evidently angry and jealous."

"You have done well. See that your eyes and ears continue keen in my service. Go."

When the man had departed, Tupac stood for a moment in thought. Then a smile crossed his evil features, and he waved von Steinberg to a seat and then took one himself.

"By the long and curling locks of Chasca!" he said exultantly, "I have a plan. I have taxed my ingenuity to the utmost in devising means of overcoming this Bell by force, always remembering that he is the Inca's friend—which means that one must proceed with caution. Now a woman's jealousy gives me an idea, and I perceive that it has great possibilities. What think you of this?" and he unfolded a plot to his keenly interested auditor.

CHAPTER XXIII

"Wine, Women and—"

"WELL, how are you feeling by this time? How's the head?"

It was late morning, following the frustrated night attack on the scientist's villa, and he and Smith had just returned from a stroll over the estate.

"Oh, nearly up to par, thanks. But every time I see your man Tumba I get the jumps. I hope he ain't the kind to carry a grudge forever."

"This is something new in his experience. He has seen a bitter enemy turn into a fawning ally for his very life's sake, but I doubt whether he has ever seen a man transformed from foe to friend by the mere exchange of words, and those neither threatening nor greatly heated. But Tumba is loyal to me, and I have given him instructions concerning you. However, I observe that he keeps you under his eye."

"Don't blame him a bit, by crackie! In fact, I can well believe the thing's got his goat. It gets mine right now to think how I let that bluffer pull the wool over my eyes. What do you suppose he's really after?"

"I can only hazard a guess, but I think the thing goes deeper than personal animosity toward me."

"Believe you're right. But, drat it! there's nothin' to do but wait for the big ox to make his next move. I've been thinkin' about a counter attack, but the odds would be against us if we ever got near that Tupac's hornet's nest he calls his palace."

"Exactly. We can only trust to our wits and the good fortune that has been ours thus far to help us overcome future dangers as they arise."

"And while we're markin' time, what've you got for me to do?"

"Can't think of a thing. You don't want to go stale here, so you might get out and take a walk around the place every day. Wait a minute." He backed away and surveyed the Yankee from head to foot. "I haven't seen you in action. How do you handle yourself in a scrap?"

"Well, I'm lean as a hound, but stronger than I look. Been here and been there, all over a sight of countries, and fought 'most any way you can name. Still alive and could tell about it, but I'm modest as the devil." An impish light danced in his eyes.

"Good. What would you say to acting as a guard, especially over the specimen cases and in general over all the place?"

"Suits me. Have you got a regulation uniform?"

"We'll fix you out all right. Tumba will attend to weapons. I have business in the city." He meant to seek an interview with Nona, having decided to acquaint her fully with recent developments.

"Better stick around your shack," warned Smith. "Things might be a little unhealthy uptown."

Bell patted his sword and showed his companion the butt of his six-shooter, which he carried concealed beneath his mantle.

"I'll take a chance on it. This business is urgent, and—"

At that moment a detail of the royal guard came seeking the white curaca in his garden. Halting his men, the leader stepped forward, saluted Bell and exhibited a mass of knotted scarlet cords.

"My lord," he said, "I hold in my hand a warrant for your arrest on the complaint of the noble Villac Vmu."

"What is the charge?" asked the scientist shortly.

"Your lordship is accused of having captured and forcibly detained one of the worthy High Priest's employees—the white man called Smith, who stands beside your lordship. My instructions are to bring both of you before His Majesty the Inca."

When this speech had been translated for him by the scientist, the Yankee seemed on the point of laughing aloud, but Bell forestalled such an unfortunate breach of etiquette with a warning glance. They took their places in silence between the two lines of waiting guardsmen and in silence trudged along the highway to the city and on to the palace.

THE Inca awaited them in one of his luxurious suites. Having dismissed the guard, he gravely intoned the charge, speaking in Spanish for Smith's benefit, and awaited a reply.

"Your Majesty," said Bell, "my person and my property have been subjected lately to serious danger through furtive night attacks. I was well aware of Your Majesty's orders that the two strangers find employment within two weeks' time, and when this, my fellow countryman, came to me, seeking a position, I engaged him as a guard. He is, by Your Majesty's decree, a free citizen of the middle class, and owes no allegiance to the worthy Villac Vmu. I therefore have the honor to deny the charge in full."

"Señor Smith, what have you to say?"

"Your Majesty, he has told the simple truth. I want to keep working for Señor Bell, for we have become good friends, and I don't care to serve the noble High Priest—though, of course, it would be a great honor."

He bowed low to conceal his sly smile.

"It shall be as you wish. Noble Curaca, you and your new guard are free to go. Any who molests you does so at his peril. We have spoken."

They gave him the accustomed lip service and backed from the room. Once outside the palace, Smith said:

"Wow! Ain't he the cold one? But he favors you, that's sure."

"Yes, the Inca calls me friend, and a true friend he has been to me. I'm going to hang around the palace for a while. You'd better go home and keep an eye on things."

When the Yankee had set off with his long, swinging stride, Bell went to look for Nona in the royal gardens. When at length he found her beside the shaded pool where they had whiled away the previous afternoon, she was in close conversation with Morea, the daughter of Caxamarka. They were seated on the stone bench, facing him. Morea looked up and nodded brightly, but Nona seemed utterly unconscious of his presence.

He stood hesitating, bound by the rules of courtesy not to interrupt—yet he was deeply puzzled. Could Nona really be unaware that he was standing near? At length he walked over and stood directly before them. His casual word of greeting brought no recognition of any sort from the girl of his heart.

"Señorita Flores," he said as lightly as he could, "aren't you speaking to your friends today?"

For answer she rose and turned her back to him. When he took an impulsive step or two after her, she moved away at the sound of his approach, quickening her pace as he drew nearer.

"Nona, won't you stop?"

She did pause, her face still resolutely averted.

"Surely you are jesting with me, dear, but I hope you will not prolong the joke. I'm desperately anxious to talk to you, for I have some news. If you don't care to answer, give me at least a smile in token of your willingness to listen."

She wheeled on him at that.

"A smile!" Her voice was infinitely scornful, though her lips trembled and her eyes were filled with tears. "This is the last time I shall speak to you. Your presence here is insulting. Please go—or will you force me to call the guard?"

Grievously hurt, torn by outraged love and wounded pride, he mutely stood his ground. She waited a moment for him to depart, but as he continued to regard her with

Illustration by Bob Dean

looks half sorrowful, half angry, she abruptly made for the palace with steady step and head held high.

A hand was lightly placed on Bell's arm, and he turned to find Morea standing at his side. She swayed toward him with upturned, amorous eyes, and would have encircled his neck with her arms had he not prevented it.

"Ah, Señor Bell, you did kiss me but lightly once—on the cheek. Here are my lips. Has not the noble white Curaca learned to kiss as a lover, with six wives to teach him?"

He pushed her clinging hands aside impatiently.

"I am in no mood for playing at love," he said gruffly.

"Such an entertaining scene I have just witnessed, your lordship—is not that what they call a comedy in the big world? I am sure you would make a wonderful actor, for you appeared so earnest, so masterful. Now, the question is—How shall the play go on when there has been a desertion from the cast? Nona Flores has tired of her part. She tells me that she and the noble Tupac are reconciled again. You know, they have been sweethearts for years. Of course they have their lovers' quarrels. It is the talk of all New Cuzco. Everyone knows that she would have wed him on the last marriage day, had it not been for a recent slight misunderstanding."

DURING this rather breathless and altogether unexpected burst of speech Bell had been staring at the girl in blank amazement. She now favored him with another soulful look and made a move which again threatened to annihilate the distance between them. He stepped aside quickly.

"Ah, my lord," continued Morea, hiding her chagrin, " of all our fickle sex, this Flores woman is probably the most changeable and flirtatious. Now I, for example, could love a man with steadfast heart, but in that respect she is my very opposite."

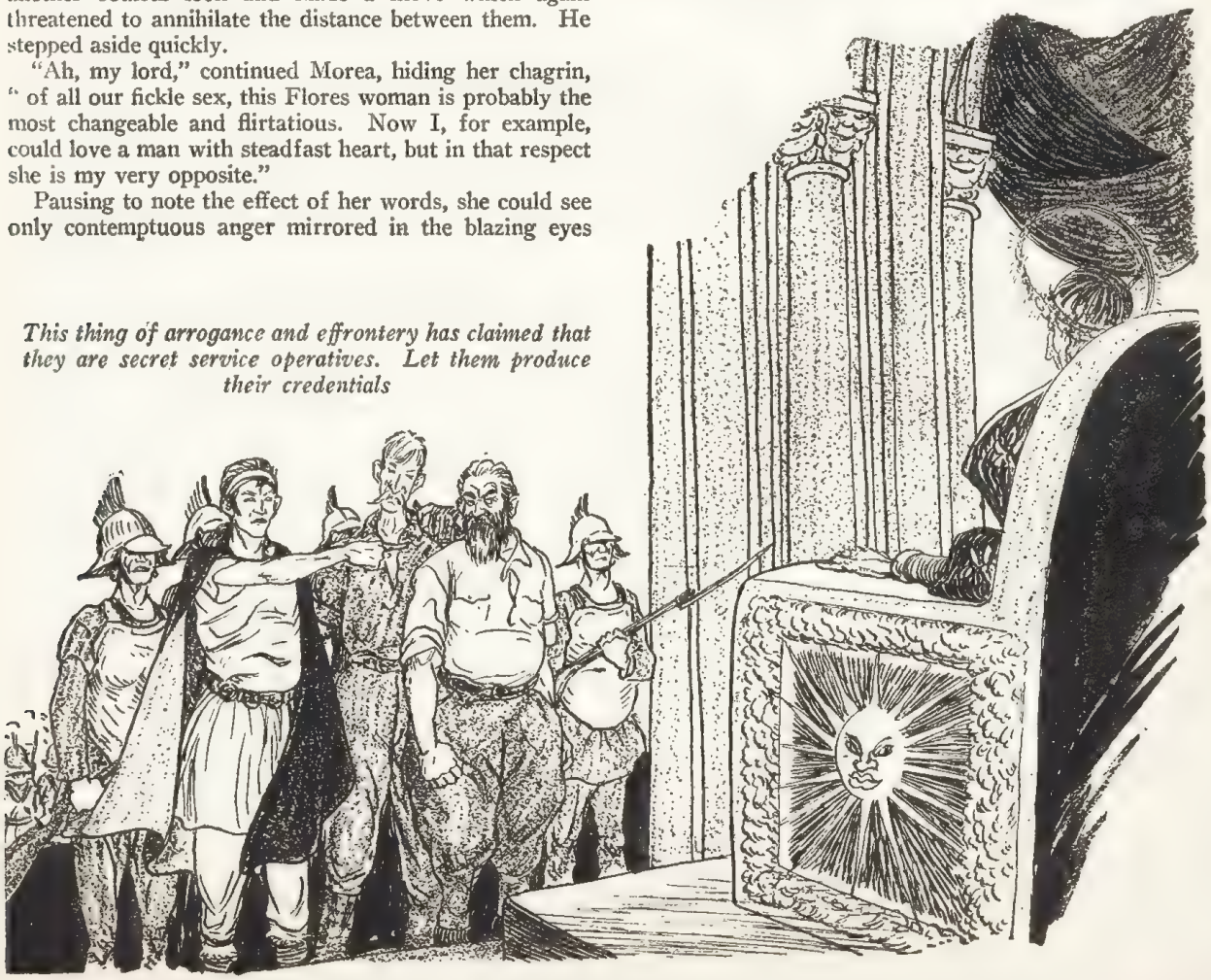
Pausing to note the effect of her words, she could see only contemptuous anger mirrored in the blazing eyes and stern, set face. Coxamarka's daughter, however, was determined to let nothing hinder the unfolding of her carefully planned story.

"Noble Curaca, you are no longer regarded with the slightest favor, though it hurts me to bear the tidings. At the very moment of your arrival I was hearing how Tupac and his sweetheart had mended their quarrel with kisses and renewed vows of love."

Bell could endure no more. Irate and disgusted, he brushed past Morea when she attempted to stand in his way and set out in the general direction of his villa. He felt the need of strenuous exertion to still his inner tumult, and before arriving at the estate, turned aside into a footpath that led to the opposite side of the mountain. He tramped and climbed for hours, returning at nightfall to his house tired and dusty, but more perplexed and indignant than before.

A bath and a change of clothing altered his appearance, if they failed to lift his depression, and he sat down to dinner with his wives. Noting his glumness, they attempted to start an animated conversation and urged him to partake of the tasty food. He ate a morsel or two, but took more wine than was his custom. It was a heady variety, and the artificial stimulus seemed pleasant after his harrowing afternoon. One or another of his solicitous wives was ever at his elbow to replenish the goblet.

"Perhaps my lord would wish to be entertained," said Mirim, emboldened when she observed his bright eyes and heightened color.



This thing of arrogance and effrontery has claimed that they are secret service operatives. Let them produce their credentials

Her suggestion could not have found him in a better frame of mind for that which she offered. A mood of recklessness foreign to him was beginning to succeed the deep dejection to which he had been a prey since the encounter with Nona and Morea in the royal gardens.

"All right, let's have a little music," he replied.

The girls tripped joyously out of the room, to return shortly, semi-clad, with stringed instruments and a rudely fashioned drum. They stationed themselves on cushions in a half-circle around him and sang a barbaric, haunting love song with a soft accompaniment. This finished, Mirim and Tzuki arose, while Puyni reached for the drum and the others played the opening strains of a melody which had been passed down through untold generations.

Bell drained his cup, let it slip from his fingers and applauded. He was more nearly intoxicated than he would have cared to acknowledge. The two girls began a graceful dance, their slender, supple bodies swaying and their bare feet rhythmically tapping the floor. The tempo of the drum beats gradually increased, and the music became louder and less restrained. The flying feet of the dancers brought them ever closer to the man they sought to charm, and at length Mirim seized his hand and pressed a quick kiss upon it. Receiving no rebuke, she bent down and lightly caressed his cheek with her eager lips. Tzuki, on the other side, followed her example.

NONA went directly to the palace after her trying interview with Bell, and once the privacy of her suite was gained, no longer tried to hold back the tears which had so nearly belied her haughty words. Oh, how could a man seem so altogether fine and yet turn out to be so base? Was it possible to trust one's intuition at all in a world so full of hypocrisy?

A brief flare of indignation toward Bell, toward unkind fate, toward the whole world it seemed, choked back the sobs in her throat. But the mood was transient. Thoughts came crowding and with them more weeping. This man had brought her the first real happiness she could remember, seeming to offer an unsullied, wholesouled love to which she might gladly yield her maiden's heart. He had cheered her in discouragement, rescued her from deadly peril and urged her to look toward a brighter tomorrow. And she had enshrined him in her heart as a true ideal of manliness, chivalry, virtue, bravery. Yes, he was brave—she must still admit that. But what of the other qualities?

Thus she passed a wretched afternoon in comfortless remembering and futile regret, the while she tasted the dregs of her bitter cup of disillusionment.

Suddenly she sat up as a thought which had been seeking admission to her consciousness abruptly claimed full attention. She had been vaguely thinking about Morea. They had never been intimates—merely casual acquaintances. The girl's indolence, superficiality and fondness for gossip had always repelled her. What if jealousy had goaded Caxamarka's pampered daughter to lie, when she had so solicitously conveyed to Nona the news that Bell was living as husband indeed with the six women the Inca had forced upon him? Why should she take the word of a fickle, veneered savage against a man of her own kind who had given her every reason to believe him gentlemanly and sincere?

She saw with a start that night had fallen. Lighting a lamp, she essayed to remove some of the traces of tears from her face and to arrange her rumpled hair. Such a question as now confronted her could not long go unanswered or it would drive her distracted. She summoned the litter which she was privileged to use by special sufferance of the Inca and ordered the bearers to convey her to the house of the white curaca.

Bidding the men to wait, she alighted and approached the open portal. The sounds of music and the hollow reverberations of a drum filled her with foreboding, but she pressed on till she stood just outside the net-covered frame which served as a screen door. The room was brilliantly lighted by a score of lamps, and when her eyes had become accustomed to the radiance she saw that which sent the color rushing to her cheeks, then set her to trembling as from an icy draught.

Bell was seated on a pile of cushions with his back to the table, a goblet held high in his hand. Four of his wives were lounging at his feet, watching him with adoring eyes while they sang the Inca bridal song to their own accompaniment. The other two—Nona looked for a moment, then turned away in disgust and sickness of heart—nestled at either side of their lord and rested their heads on his shoulders, each with an arm about his neck.

The watchful Tumba had noted the approach of the litter and had seen Nona alight and make her way to the house. He ran to his master, seized his free hand and pointed toward the door.

"White girl here," he whispered.

Bell rose, the fog instantly clearing from his brain, and dashed the goblet to the floor. The expressions of Mirim and Tzuki changed from happiness to alarm as he roughly thrust them aside. He hastened to the door.

"Nona!"

"Wine and love . . . if it be worthy the name. I came, thinking I might have misjudged you. I had to know. Now I am . . . I am . . . satisfied."

She started away He flung the door open and followed—barred her way.

"You must hear me! I was angered and terribly hurt by your treatment today. Wine . . . and entertainment . . . for forgetfulness. These girls are nothing to me. Can you not see?"

"I have seen . . enough. Tupac is better than you in this respect at least: he does not pretend to be what he is not. I will marry him as soon as the Inca will permit."

"Nona, you must not do this terrible thing! Give me a chance to prove—"

"Stand aside, please. I make my own choice as you have made yours. Good-bye."

A moment later the sedan and its passenger vanished in the night.

CHAPTER XXIV

The Work of the Sorcerer

MIRIM and Tzuki had sought a shaded spot in the garden where they might discuss their besetting problem. Bell had come down late to breakfast, silent, somber-eyed and pale. He had gone to the city immediately afterward, having first been overheard telling Quizta that he was on his way to the Inca's morning audience.

"Ah," said Mirim, "I did think, when he accepted our caresses and allowed us to recline on his bosom, that we had at last won our husband. If the white woman had not come, perhaps . . ."

She let the sentence go unfinished. Both sat for some moments, their dark eyes brooding and sad.

"It may be that he loves her," said Tzuki at length. "But she is betrothed to the noble Villac Vmu. When they are married—would that they were even now—he may yet learn to love us. As it is, I am sorrowful and sick at heart by day, tearful and sleepless by night, longing for even the smallest display of affection."

"I, too. And I love him more deeply with every passing hour. He is generous, thoughtful, kind. If he would but open his heart to us, the world could not contain happier wives than we should be."

"What is there left to do? It seems we have thought of every possible device whereby we might please him."

Mirim did not answer. An aged man had come tottering toward them, and she noticed by his attire and the paraphernalia he bore that he was a medicine man or sorcerer. He approached them with feeble step, leaning heavily on his staff. Halting within a few paces of the two girls, he addressed them in a quavering voice.

"May the great Lord Sun shine on you with favor, my daughters," he said. "Am I in the presence of two of the fortunate wives of the noble white curaca, whose fame has spread throughout New Cuzco?"

"We greet you in the name of the mighty Lord Sun and the blessed Moon Mother," answered Mirim. "Yes, good uncle, we are wives of the white Curaca, but not so happy as you might suppose."

He peered at her closely with every appearance of great concern; then turned to Tzuki and scanned her face, frowning and squinting his eyes as though it were difficult for him to see.

"Pray, indulge an old man, my daughters. My sight is failing fast. How is it that your lot is not a blessed one?"

"Ah," said Tzuki in a low voice, "we are denied the great boon of our husband's love."

"Indeed? This is most sad. But the others—are there not six of you? How is it with them?"

"Alas, none of us has found favor with our lord."

"Be not discouraged," replied the sorcerer in gentle, kindly tones. "Many a time in my long life have I remedied just such a condition."

The girls watched him breathlessly while he selected from among his trappings a small gourd, stoppered with a wooden plug.

"Here is a love potion. Put but a little in each cup of wine, and when all of you have drunk thereof in company with your beloved husband, you will gain his undying affection. It never fails."

They stretched out their hands eagerly to receive the magic flask, and when Tzuki had it safely tucked within her garments next her heart, both ran to the house, returning shortly with their hands full of gold and jewels. These they pressed upon the wretchedly clad old man.

"My daughters, your thanks had been enough, with perhaps one little piece of gold. Such generosity overwhelms me." The feeble voice trembled with emotion.

When their caller had picked up his kit of what-nots and taken his departure, bearing their fervent blessing, Mirim and Tzuki hastened back to the village to acquaint the others with their good fortune.

Tumba, eyeing the dust-shrouded figure of the old man shambling along the highway toward the city, fingered his knife and half rose from his seat on the broad terrace. There had been something vaguely familiar to him about the face he had seen for a moment as the ancient had turned to look back before taking to the road. Puzzled by the smouldering resentment which one brief glimpse had kindled within him, he resumed his seat with uneasy reluctance, wishing that his master had been present to give him leave to follow or to quiet his apprehensions. At length he dismissed the matter from his mind.

AT the noonday meal Bell was engrossed in gloomy brooding over the imminent marriage of Nona and the Villac Vmu. On his way back from the city a half hour earlier he had encountered a troupe of brilliantly garbed heralds. Upon seeing him, they stopped, knelt, rose again and addressed him thus in unison: "Most noble Curaca, we are bidden to announce unto all the nobles this edict of His Majesty the Inca, ruler of New Cuzco and hereditary monarch of a vast realm yet to be regained: Know that when our mighty Lord Sun shall have marked the third hour past meridian upon the golden dial before his temple, there shall be performed by His Majesty's special sufferance a ceremony of marriage joining Tupac, the noble Villac Vmu, with Nona Flores, called the lady that heals. At the house of the Villac Vmu shall this happy event take place. Let all forsake their occupations and prepare for the wedding feast, which shall continue until our blessed Moon Mother withdraws her face. The Inca has spoken."

"The Inca has spoken. All glory to the Inca," Bell had said as he bowed in acknowledgment of the decree.

What ideas had since passed in rapid succession through his mind; what resolutions he had formed and abandoned; what emotions had swayed him—he did not care to recall. Of what avail were the travail of his soul and the agony of his mind? Nona had declared to him only yesterday that she would petition the Inca for an early wedding with Tupac, and certainly she had wasted no time. But why? . . . Why?

Yet in spite of his preoccupation, the master in his position at the head of the table gradually sensed an air of suppressed eagerness among the six women who called him husband. Indeed, it appeared that his attention was greatly desired. When his glance had completed its mildly questioning course around the table, the sextette did a totally unwonted thing. Seizing their wine cups as though by common consent, all held them aloft while they looked toward him as though proposing a toast, then drained them to the dregs. This was surprising in the light of their habit of sipping wine slowly with their food. The intensity with which they continued to gaze at him was a bit embarrassing, and he toyed with his goblet to hide his confusion.

He was about to sip his wine when he noted suddenly that all of the girls looked deathly pale, and that they seemed to be laboring for breath. Mirim abruptly dropped her hands to the table for support and leaned toward him, her eyes unnaturally bright.

"Oh, husband, drink . . ."

Her voice trailed off, the light in her eyes slowly dimmed—went out—and she pitched forward without a sound.

Bell sprang to his feet to give her aid, calling for his servants. Then he heard a smothered cry and saw that Tzuki had fallen limply to the floor. His retainers came crowding into the room, then stood transfixed with horror as one by one the other girls succumbed.

Soon they burst into frenzied action. One went to find the amauta, another to bring an old woman with a reputation for healing. When these two had arrived and

made a brief examination, they pronounced the maidens dead.

A small gourd flask was found tightly clutched in Tzuki's left hand. Examination showed that it had contained a dark-green liquid.

"Have any strangers been seen about the place today?" demanded Bell.

Tumba stepped forward and began to speak. Finding the clumsy Spanish inadequate, he relapsed into his native tongue, which was readily intelligible to the scientist. Yes, he had seen an old man leaving the garden that morning. He had looked like a ragged traveling sorcerer. Tumba had seen the paint-smeared face, turned for a backward look. The hair of his head had bristled at the sight—just why, he had been unable to say.

"Do you know now who he was, Tumba?"

The guide's eyes flamed with hate. He came close and whispered:

"Tupac!"

BELL was deeply shocked and righteously indignant. Six innocent lives snuffed out at one ruthless blow! Would the bloody High Priest's mad career of revolting crime leave an endless trail of death over this smiling land?

When the bodies had been tenderly conveyed from the room and the servants had gathered in awe-struck, whispering little groups, the master of the bereaved household looked about for his Yankee guardsman. The latter, for once, was subdued into temporary silence by the things his eyes had just witnessed. Lacking the cumulative personal grievance which Bell had against Tupac, his anger was slower in kindling. The scientist found him seated on a large rock, gazing abstractedly at a flock of birds that had settled in an adjacent field.

"Smith, do you know that he failed to get me this time by the merest chance? In another minute I'd have tossed off his deadly brew . . . just one more victim of this fiend in the guise of hideous flesh. And to think that I passed up several chances to wring his neck! Smith, I'm going to be his executioner. When I've finished him, I'll take my chances on shooting a way out."

Tumba, whose eyes had never left his master's face, divined his intention and followed, looking to his weapons.

"Just a minute," said the Yankee when they had reached the door. "I grant you he needs killin' awful bad, and you got as much right to do it as anybody, but it's too much of a chance to take. There's a better way. Why don't you and Tumba go and carry off the girl?"

"Why, that's out of the question. As she feels toward me now, there's nothing to be gained by bringing her here. I haven't the heart to face her scorn again. No, Tupac must be put out of the way, and then we'll see how things come out afterward."

"Listen—you do what I say. Go and get the girl and bring her here double quick. I've got everything ready to leave this damned mountain."

"How? It's a physical impossibility."

"No time to parley. You go on and do your trick, and I'll take care of the rest."

Still incredulous, but impressed by his countryman's quiet assurance, the master beckoned to Tumba, and they ran to the servants' quarters, where four sturdy men of proven loyalty were selected as worthy of a part in the undertaking. Bell instructed them what to do as they hastened toward the city.

He assumed that Nona would be in her suite preparing for her marriage with Tupac, and that the Inca and every other person of rank would be congregating at the High Priest's house in honor of this state occasion. The common people would be about their afternoon business; the serfs, in attendance upon their lords and ladies. In view of the deserted condition of the streets, these suppositions appeared to be well grounded.

They cautiously entered the royal gardens, encountering no one, not even a guard—thanks to the sovereign's confidence in his security. Tumba took the lead, while the others kept to the cover of the shrubbery. He returned at length to report that Nona Flores' litter bearers were waiting at a rear door of the palace. A well-planned surprise attack was launched, with the result that the unsuspecting slaves were bound and gagged. Commanding his men to place their captives among the dense trunks of the near-by banyan trees and to assume stations at the litter, the American drew his automatic and made for the palace, Tumba following.

Once within, they were obliged to conceal themselves several times behind pillars and images in order to avoid encountering groups of nobles taking their belated departure for Tupac's house.

The door to Nona's suite opened from within just at the moment of their arrival. They hurriedly entered and Bell closed the door, standing with his back to it, while Tumba unceremoniously trussed up the frightened woman who had just finished preparing her mistress for the wedding. The stoical Indian clapped his hand over her mouth at signs of hysteria and took the needed precaution of bridling her tongue with a bit of cloth before he locked her in the bathroom.

Nona, wan but determined of visage, looked at Bell with wordless scorn for a moment, then turned and ran for the window. He quickly intercepted her.

"Nona, will you go quietly? I dislike to treat you as Tumba has handled your servant. But you must go with me, whether willingly or otherwise."

"What new effrontery is this?" she demanded with a flash of her former spirit.

"We are going to escape from this mountain. Come."

"With you? Death would be better."

He picked her up bodily, unmindful of her struggles, and nodded to Tumba to open the door. Reluctantly, he stifled her cries with his palm as they moved quickly through the deserted halls to the waiting litter. He deposited her on the cushions, where she lay stricken and silent, apparently lacking the strength to protest by word or movement. However, when the bearers had taken up their burden, he and Tumba took positions at either side of the sedan to prevent her escape.

The stalwart carriers swung into a rhythmic trot, covering the distance to the estate in a surprisingly short time. Smith emerged from the crowd of gaping retainers and ran to meet them. He led the way to the rear of the villa and through the vineyards, to the very edge of the cliff.

Four patient burros, with packs securely fastened, stood drowsing with ears awry. Several large stack covers of heavy canvas, roughly circular in shape, lay near-by, with light ropes attached by means of leather eyelets. The scientist, quickly comprehending the plan, left Tumba to guard the litter while he helped the Yankee attach the improvised parachutes to the wide strips of canvas slung under the bellies of the animals. They

pushed the first one over and watched breathlessly till the cloth opened out and retarded its fall. They were gratified to see the burro make a perfect landing and start to walk unconcernedly away.

Thus encouraged, they rapidly prepared the others and sent them down from stations along the cliff a rod or so apart. The second landed awkwardly and seemed unable to rise.

They had no opportunity to mark the fate of the remaining two, for a great roar and tumult behind caused them to turn and reach for their guns. Tupac and von Steinberg, leading a party of horsemen, came charging through the vineyard. Rifles cracked and a spray of bullets whizzed around them.

CHAPTER XXV

Flight

BELL and Tumba had made a dash for the litter immediately after recovering from their first surprise. The bearers, having apparently marked the approach of the attacking party much earlier, had discreetly absented themselves. Now the scientist and his faithful guide bore Nona in haste to the shelter of a large rock, from behind which they sought to hold the Villac Vmu and his men at bay.

The havoc wrought by several well-directed shots created momentary consternation in the ranks of the besiegers, giving Smith an opportunity to fasten one of the parachutes to Nona and send her over the cliff. He had more trouble with Tumba, who refused to leave his master's side until the scientist, cursing him for a fool, when he could have embraced him for his loyalty, curtly bade him go. The Yankee saw to Bell's fastenings while the latter emptied his magazine and picked up another rifle.

Shouting, "I'm off!" Smith leaped from the cliff, to be followed quickly by Bell. Whining bullets and a shower of rocks missed them by uncomfortably close margins as they descended. When they had disengaged themselves from the parachutes and joined the others, however, the rain of missiles ceased altogether.

"Tupac's afraid of hittin' the lady," said Smith. "That gives us a chance to get goin'."

He had been examining the disabled burro as he spoke. Finding that one of its legs was broken, he dispatched it with a merciful shot.

"Thought we'd have two for pack animals and two for ridin'," he muttered to Bell, meanwhile selecting the indispensable articles from the dead burro's load, "but now we'll have to do without one. Takes two for carryin' the stuff we got to have."

When the loads were distributed to his satisfaction, he assisted Nona to mount the third animal, placed Tumba in the lead as guide, and gave the command to start.

"Where shall we head for?" asked Bell.

"Guayaquil, I guess."

"Tumba doesn't know this country."

"Well, I do . . . in a way. He can keep his eyes peeled for trouble and pick out easy goin'. We'll get there, all right."

The horsemen had vanished from the top of the cliff, and Bell surmised that they would make for the defile as soon as they had picked up supplies for the party.

"We have eight miles' start," he said to Smith. "It's four miles to the pass and four more to this spot. Maybe we can get far enough into the jungle to elude them. If not, we'll give them a hot little reception when they arrive."

"Uh-huh," grunted Smith, as he urged the burros to their best pace.

The prospect of traversing the broad, sparsely wooded plateau, however, and of finding a way out through the low-lying mountains which bordered it on the west before they should be overtaken by the horsemen, seemed more remote with each passing minute. Smith continued to busy himself with the animals; Tumba, to scan the plains and mountains ahead with eager eyes; and Bell, with increasing apprehension, to keep a sharp lookout in the direction from which the pursuers would come.

Suddenly Tumba darted on before them, running for upwards of a quarter of a mile. They saw him stop and scan the ground, then raise his hand in a gesture which bade them follow. When the rest of the party arrived at the spot, they saw what had caused their guide's eccentric movements. A deep fissure, a trifle too narrow to be called a valley, ended at their very feet. Far below could be seen the billowing green of the forest where the tropical vegetation had advanced to claim the lower levels. At that moment, Bell caught sight of a distant cloud of dust which proclaimed the approach of Tupac, von Steinberg and their henchmen.

BELL assumed his natural place of leadership. First, he instructed Nona to dismount from her burro. Then, leaving Tumba on guard at the cleft's entrance, he helped Smith join the remaining trio together with ropes against the hazzard of a misstep. When all was ready, he drove the sure-footed beasts ahead of him at the best possible gait, Nona following without a word of protest and Smith, whose mingled chuckles and curses furnished a murmured accompaniment to his agile movements, concluding the chain.

There appeared to be a well-defined trail, no doubt worn by the feet of grazing animals of the plains in their quest for water and by the carnivora of the jungle in nocturnal raids on the herds. The going was surprisingly easy, and they reached the protection of trees and undergrowth within twenty minutes. Tumba came bounding after them, to report that the horsemen were very near and riding directly toward the fissure.

The guide, in his natural surroundings once more, scouted ahead for a path which Nona's saddle animal might follow with the least inconvenience. The others ran the risk of colliding with vines or tree trunks in order to cast frequent glances behind. Turning from a close scrutiny of the forest through which they had come, Bell found Tumba at his elbow and the rest of the party waiting and watching the Indian. The latter held up a warning finger before he placed his lips to his master's ear and whipered, "Caribs," indicating the tangled mass of greenery just ahead.

"Smith, you find a place to hide the girl and the animals," said Bell in subdued tones. "I'll go on with Tumba and see what has stopped him."

The guide proceeded stealthily for a short distance, then flattened himself on the ground and wriggled forward. Bell followed his example, and shortly found that Tumba had paused once more. He drew up abreast of the Indian and looked intently at a spot which the latter had singled out with his eyes. After a moment he heard the sound of voices, and at length traced them to their source. A party of savages lolled on the ground in a

small clearing. Just then one of them stood up, and the grim relic dangling from his belt told the scientists that these men were not Caribs, but head-hunting Jivarros.

Thankful once more for Tumba's keen and unerring senses, and aghast at the thought of what might have happened had they blundered into the clearing, he briefly acquainted the guide with their enhanced peril and bade him lead the way back to the others.

CHAPTER XXVI

The Head-Hunter's Trophy

THE movements of Tumba, after he had gathered the party together once more, were deeply puzzling to the scientist. In spite of the fact that Jivarros blocked the way, he led them directly toward that dangerous spot, having first enjoined them all in his halting English to keep as quiet as possible.

The thud of hoofs and the crackling of dry sticks to their rear began to be audible. When it seemed that they were certainly caught between two fires, Bell's perplexity gave way to grateful admiration; for the Indian, abruptly turning to the right, conducted them down into a gully of whose very existence none of his companions had been aware.

The scientist climbed to the brink of their hiding place and warily peered out. Sure enough—he caught fleeting glimpses of creeping brown forms. The Jivarros were preparing an ambush. Bidding the others to proceed, he waited beside the trail with the overhanging foliage a safe screen against the casual glance of any passer-by.

The first two horsemen to approach were Tupac and the German, riding side by side. Though neither spoke, the faces of both portrayed the expectations of grim triumph harbored in their minds. Behind them pressed a troop of Tupac's henchmen, slayers all and evidently eager for the kill. Such was their number that, had they overhauled Bell's party in flight or at bay, the little group would surely have retarded their onslaught for seconds only, if at all. In fact, the scientist doubted whether even the fierce Jivarros, with the advantage of surprise on their side, might be expected to win a victory.

Waiting with bated breath, Bell saw the last armed rider vanish around the nearest curve in the trail and wondered why the head-hunters had failed to attack. His doubts were short-lived, for almost instantly a chorus of savage yells rent the air, accompanied by the twang of bowstrings. A veritable hail of arrows from the bows and deadly *courari*-tipped ones from the blow guns must have been launched, so the scientist judged; for the poorly directed missiles alone rattled and swished through the foliage in scores. The undercurrent of whistling sounds told him that the terrible bolas were flying thick and fast.

There were shouts of surprise from the assailed; then cries of agony from the wounded, mingled with the screams of smitten horses. Rifles cracked and ricochetting bullets whined away into the forest depths, some of them coming uncomfortably close to the place occupied by the scientist.

As the clash of side-arms announced that the bloody hand-to-hand fighting had begun, Bell cautiously withdrew and made discreet haste to overtake his companions.

Nona Flores heeded his arrival no more than if he had been non-existent. Since he had placed her in the sedan, and throughout the ensuing strenuous action, she had maintained a moody silence. He approached more closely —stood directly in front of her. For the hundredth time she turned away, the angry color flaming from throat to temples. Yet she made no outcry, and for that much he was thankful. Walking beside her, he quietly told her about the Jivarros and the urgent need for eluding them, commended her grit and, having received no single word of reply, went on to confer with Smith.

For more than two hours they pressed forward with all possible haste, though the humid, oppressively hot air of the jungle depths was taking its toll of both man and beast. The gully ended in a flat, thickly matted floor—evidence that they had reached the lower forest level. Presently the three men held a brief council, resulting in the decision to keep going for another half-hour or so, then to make camp for the night. Whether the battle should have one outcome or another, it would be wise to put as much distance as they could between themselves and both bands of enemies.

This plan was accordingly put into effect and they were about to encamp when Tumba, suddenly enjoining all of them to keep silence, slipped off into the bush to reconnoitre. He had not been absent for more than three minutes when he abruptly emerged from a place in the undergrowth opposite to his point of entrance.

"Sh-h-h!" he cautioned softly. "No talk. No move." Then, approaching Bell, he said more softly still: "Head-cutter all'round. Many hurt, many kill, but got plenty head and gun. They see us, get more head and gun mebbe-so. Uh!"

"If they see us," replied Bell grimly, "get plenty bullet —nothing more."

He prepared his little party for the expected skirmish as thoroughly as he could, screening Nona from possible flying missiles between the burros and their packs, posting Tumba and Smith at two of the angles of an imaginary defensive triangle and occupying the third angle himself. Thus situated, they could face attack from any quarter or, at need, from all directions.

Surrounded as they were by savages, Bell felt that only a miracle could save them from discovery. It seemed to him presently, however, that the miracle was about to take place, no savage having come directly upon them, when his hopes were suddenly dashed. One of the burros, for some mysterious reason known only to its perverse self, threw out its head, opened its jaws and emitted a loud bray.

THERE followed several moments of ominous silence in the surrounding jungle. Then abruptly the bush yielded up leaping, yelping, hideous-faced Jivarros from every side. The ready rifles spat their hot messengers of death, mowing down the foremost circle of savages and giving the others pause. Empty and useless, the rifles were dropped and automatics brought into play as the second wave of attackers charged.

These fierce warriors were massed in close formation as though for hand-to-hand fighting. If such was their purpose, its accomplishment surpassed their courage and ability. The sputtering little weapons inflicted frightful casualties. The line wavered and broke. Then the survivors scurried to the very limits of the clearing where they crouched, jabbering and gesturing frenziedly.

"Load the rifles, Tumba," ordered Bell sharply. The guide performed this assignment with dispatch. "Hand one of them to me," continued the leader. "I'll raise a little dirt at their feet to help them reach a decision."

Evidently this new disaster, coupled with the loss of many comrades in the recent encounter with Tupac's party, had dulled the head-hunters' battle lust; for the handful that remained suddenly took flight and vanished in the jungle.

Bell's first concern was for Nona. She had risen, but seemed as yet unaware of their good fortune. He was overjoyed to find that she had escaped even the slightest injury.

"Have they gone?" she asked; and Bell noticed that with these, her first words to him since they had taken the trail, there had come a perceptible change of attitude.

"They have," he answered, and was about to turn away when she timidly placed her hand on his arm.

"I have been thinking," said Nona Flores in somewhat tremulous tones, "while you were out there fighting those yelling demons—thinking what it would mean to me if you were suddenly to be taken from me forever. I—I couldn't stand it." She buried her face in his shoulder and was quickly encircled by two strong arms.

"And life without you is unthinkable, dear girl. Will you let me make a suggestion? Shall we frankly admit to each other right here and now that Morea's trickery made fools of us both?"

She nodded assent and clung to him for a moment before raising her lips. The sweetness of reconciliation was rudely disturbed by the drawling voice of Smith.

"I say, Mr. Bell, kin you come here a minute?"

"Yes, but is there any hurry?"

"Do you s'pose I'd call you for nothin'?"

Still reluctant, Bell walked to the spot where the Yankee awaited him. Smith pointed silently to a fallen Jivarro whose gaudy insignia proclaimed that he had been a man of importance, probably a chief. His forehead had been neatly drilled by a bullet from one of the automatics.

The scientist, casually noting these obvious details, wondered why he had been asked to view this particular body. Then he noticed two gruesome objects attached to the fellow's belt. They were newly severed heads—one, the bearded, distorted face of von Steinberg; the other, Tupac's hideous visage. The glazed, sightless eyes seemed only a shade less malignant in death than in life.

"Thought you might want to see them two loose knobs," commented Smith. "Guess that pair won't bother us no more. Pah! They made me sick when they was all in one piece, but they make me sicker now. Let's get goin'."

Nauseated, Bell acted on this suggestion without delay. the party forthwith sought a more favorable camping spot where they spent the night unmolested. . . .

SOME two weeks later, the good Padre Juan smiled benignly and raised his hand in farewell benediction upon four people leaning over the rail of the staunch American steamer which was just departing from the port of Guayaquil, bound for points north. It would undoubtedly be an injustice to assume that the benignity of the good padre's smile was influenced to the slightest degree by a certain bank note of magnificent denomination which reposed at that moment in his much worn and often depleted wallet. He had been amazed to the point of a mere "Gracias, señor" when the tall, bronzed stranger who had emerged from the jungle with his three companions a few hours before had handed him this note. An explorer, perhaps—but with such a queerly assorted party!

True, he reflected, the affair savored of the unusual in more respects than one. He, Padre Juan, had performed the simple ring ceremony which united the tall man and his beautiful girl companion in the holy bonds of matrimony. Of a certainty, without his influence the matter could not have been so greatly expedited. And then the half-clad Indian and that tall, raw-boned fellow who spoke with a peculiar nasal twang had acted as witnesses. Ah, well, one encountered many strange things in the course of a long life.

The four distant figures at the rail waved their farewells in return as the ship, outlined against the flaming background of a gorgeous sunset, steamed out upon that red-gold pathway along which, according to the traditions of their descendants, the first Inca and his bride had come from their celestial home to found a mighty empire.

THE END

The Miracle

Oh, chlorine gas is poison,
And sodium has a fault,
But wed the two and you will brew
The miracle of salt.

—*Susie M. Best.*

Letter *of the* Twenty-

By Leslie F. Stone

Author of "Out of the Void"

IN this "Letter from the Twenty-Fourth Century" the author of "Out of the Void" strikes a unique chord. Many prophecies for the future have been given forth? What is the progress of mankind and science likely to be?

MY DEAR JOE:

It is a long time since we have seen each other and I am aching to have a quiet little chat with you. Do not be surprised if I drop in on you some bright afternoon. I have long been threatening my wife that I shall take off a day to have a little jaunt down your way if you do not hurry and visit us before long.

There is not much news for me to write you. What new news could we discuss when you are aware of every little thing that happens here, immediately, in your little out-of-the-way place of the globe.

However, I did come across something that would interest you, I believe, quite as intensely as it has interested me. You know that old grotto in which we used to play that was once presumably the cellar of some old house, and which proved such a source of interest to us kids?

Well, a month since, for want of something else to do, I went down to it with the intention of learning if there was anything there that should be preserved in the way of a curio, for if you recall the fact, the ruin is at least several centuries old. I found that it was very well preserved, and that rot and decay had not as yet set in. I did find some articles of interest back in the shadows, where we as children feared to creep, picturing it filled with snakes and rats which we knew once had hidden in such out of the way places. I found an old shot-gun of the twentieth century, some utensils I took for cooking pots, some odds and ends whose uses I did not recognize, but what proved more interesting to me than anything else was a pile of magazines together with some old books in a box. Though yellowed by age they still appeared readable, so I brought them home.

And how interesting they have been! I was glad that as a child I had studied the language that they were written in, the English of our forefathers. They dated for the most part from the year of 1920 to about 1935, and proved to be stories of predictions, prophecies of the future, jaunts into interplanetary space, of strange finds and of stranger discoveries. What a wealth of imagination was disclosed!

And what our ancestors thought of us, Joe; what creatures they suggested we should turn into, what catastrophes they planned for us, what wars, what unholy terrors! In one tale we were to become mechanical geniuses; in another it was prophesied that we would become the mere pawns of people from another planet, again we were torn by wars; the white race to be subjected to the black, or the alternative of all being submerged into one great race!

Another tale had to do with the supremacy of woman and the deterioration of man; of children bred and reared by machines; a third told about machines that controlled mankind; still another told of peoples of the underworld conquering us; another told of creatures who had lost the use of their legs because of their continued use of motive power. Of . . . oh, I could go on and on indefinitely with the details of the stories I found, but I leave the rest to your imagination.

Now what would these ingenious writers, these prophetic ancestors of ours, say today if they could come among us? Would they be disappointed to find that the world is still moving along in its usual every-day grooves; to find us still the same people with two legs and two arms, two eyes and one chin; the same people of habit that they were; would they marvel to see us still enjoying family life and simple amusements?

Of course they would find changes, the world does not stand still for a single night. They would find airplanes as common as the automobiles of their day; they would find that we moved around this little globe as rapidly as they made a day's trip through one country; they would find us using radio in the same manner as they used the telephone.

They would find us enjoying home life far more than they ever dreamed it would be enjoyed. We have no need of leaving the house now, no need of pushing through crowded traffic to get to a show. Instead we can sit in our own living room and watch and listen in complete enjoyment; we have no need to go to churches for our religion; nor of sending our children to schools for their education.

HOW much of an improvement are our ways over their ways! Now a man can sit at his home and conduct his business as safely and as successfully as they once did in their offices, merely by having installed his own private mirror and radio receiving and sending sets. His children can sit in their own playroom and see their teacher many miles away and recite to her their lessons, learned without leaving the house, learn their geography and chemistry as well as and better than our ancestors did. We can sit in our comfortable chairs and watch and hear the greatest actors and actresses of all time perform before us. We can see and hear the

Fourth Century

greatest of musicians fill our lives with the beauty of their art. We can hear lectures, art discussions, economic treatises from across the world. We can "tune in" on the World Court and know their decisions as quickly as they are made.

Of course we have progressed. We have done away with the barriers of the old-world boundaries of nations; we have evolved for ourselves a common language by which we can all understand our fellow-men; we have done away with kings and presidents and each of us has his little say in carrying out new policies, of deciding what is best for our old planet. If we consider it necessary to build a new observatory to discover new worlds in space, to appropriate new money for the enlargement of our educational centers, to decide whether Yokohomo deserves a new air-port, if new farmlands should be opened up in New Zealand, we can speak!

We certainly have progressed. Our chemists have found new worlds to conquer. They have given us a new process of generating power from the atom instead of using oil and coal which are less efficient. They have discovered that certain chemicals in various foods are needful to the human body, and know how to separate the chaff, so that we no longer need eat the whole vegetable to obtain its small source of energy. They have learned how to turn ore into metal by one process as it is mined by machinery. They have learned to make glass that is unbreakable, materials that know no wear!

Of course we have progressed. Our medical men have discovered that we no longer need suffer from disease, from death-dealing scourges, from the ravages of old age so that we die as we have lived. They have discovered how to keep us healthy; how to make our children strong, virile and wholesome; how to keep our mind and bodies alert; how to operate upon us without pain and without drawing blood. They have discovered how to make child-birth a safe and beautiful function!

YES, it is easy to go on and on, and if only our poor misled ancestors could see us now! They predicted that we would all be living in great cities; spending our lives within four walls of tremendous skyscrapers; eating only synthetic food that had no flavor whatsoever of the sky and the earth and the sunlight. They predicted us as being no more than automatons, being born, living our lives and dying in the manner prescribed for us by scientists!

They could not see this beautiful world that is ours, this world that no longer knows the black, hideous smoke of factories, of the squalor of ghettos, of tenements, of a poor half-starved population struggling to earn a few cents for a loaf of bread, of thugs that killed for money, and demented creatures who murdered for nothing at all.

They could not see that one day civilization was to sicken of its cities, was to demolish them one by one as they moved away to dwell in peace and beauty with the birds singing in the trees and flowers nodding their heads at us! They could not realize that even the deserts might be made to bloom again and the swamps to be lifted into the sun. They could not see a sweet, simple home life where men and women could grow in natural surroundings; where workers earned their daily bread in glass-roofed buildings with the sunlight filling their veins as they toil, and the assurance that their loved ones have their gardens, their flowers, their health.

They could not know that the world's knowledge would be freely given to all, worker or idler alike; that radio would make the whole world kin and the poorest of the poor would have their little airplanes in which they could, with their children and wives, climb to the heights of heaven or circle the world in a day.

No, they saw none of this, but it was they who made it possible, just as their ancestors of a few hundred years earlier made it possible for them to realize their dreams!

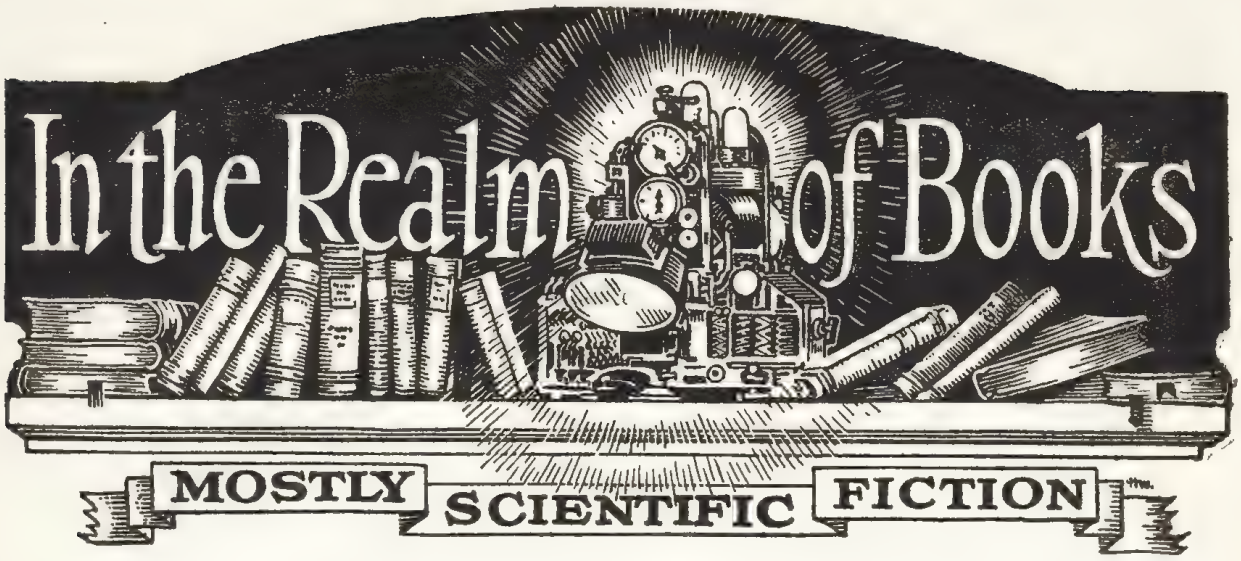
SHALL we now conjecture about the future, Joe? Will someone years hence read these words and smile to think of all we have missed, and of all that they have got? The earliest of men progressed, whether from the dank hole of his ancestral cave, or from the dust of the centuries, and Man will continue to progress, progress each century to a better and greater life.

Perhaps one day our descendants will fly from planet to planet as we do from island to island; perhaps they will find food in sunlight; perhaps they will discover cloth in fire. Well, whatever the future may be, I am sure it will be far happier and better than even that which we claim today. At all odds, life is good and it is good to be living.

And you, my friend, down there on the edge of nowhere puttering around the ruins of what used-to-be, try to remember and pay me a little visit. If you desire, I will send you by next mail a bundle of the stories I have mentioned, I assure you that you will gather as much enjoyment in reading them as I have. I extend my thanks to the long-dead friend who so kindly cached them away for my perusal.

As ever, your devoted friend,

HARRY.



World Domination

"The Earth Tube," by Gawain Edwards. *Published by D. Appleton & Co., N. Y.,* $2.00.

THIS book draws a vivid picture of the struggle for world domination between the Caucasian and the yellow races, with Asia coming out second best.

It starts with the discovery of seismographic disturbances and earthquakes repeated at regular intervals. Dr. Scott, assisted by King Henderson and by his daughter, Anna, figures out scientifically that the Asians have constructed a tunnel clear through the center of the earth and even predicts the exact location of the mouth of the tunnel on the western hemisphere. Their statements are greeted with contempt and unbelief, but even Dr. Angell, the secretary of war, a typical incompetent politician, is finally convinced. The western end of the tunnel is discovered to be located near Buenos Ayres, and it is found that the metal used by the Asians for construction purposes is indestructible. It is further discovered that an enormous earth traversing car is the cause of the numerous earthquakes. This car, traveling by gravity, is used to transport men and machines to the Western hemisphere, and finally the Asians begin their conquest of the Americans.

Their tanks, constructed of "Undulal," which is indestructible, are invincible and the victorious march of the Asians cannot be stopped. All means to stop the advance fail, and as a last resort, King Henderson invades the Western stronghold of the Asians and discovers the secret of Undulal, which can only be destroyed by liquid air. He is taken captive, and condemned to death, but is shown all the secrets and marvels of the Asian cities. He is also transported with the earth car to the Eastern stronghold and then returned to the Western hemisphere. He has met an American girl, who, destined for the harem of the Asian king, finally helps him to escape, by taking a daring chance.

By the use of liquid air the advance of the Asians is finally stopped. In the meantime the Asians have built airplanes from which they dump enormous quantities of gold, thereby upsetting the enormous treasury balance of the Americans, but by the discontinuing of gold as an economic base, the scheme of the Asians is frustrated. The Western stronghold of the Asians is destroyed including the Earth tube, and after a series of tremendous earthquakes peace reigns once more upon earth.

This book can safely be recommended to all lovers of scientific fiction.

It is vividly and plausibly written, and it is to be hoped that Mr. Edwards will not stop with this book.

—C. A. BRANDT.

In this department we shall discuss, every month, topics of interest to readers. The editors invite correspondence on all subjects directly or indirectly related to the stories appearing in this magazine. In case a special personal answer is required, a nominal fee of 25c to cover time and postage is required.

A SEQUEL TO "THE SKYLARK OF SPACE" DESIRED—ALSO ONE TO "THE MOON STROLLERS"

Editor, AMAZING STORIES:

I am enclosing with this letter the Reader's Vote of Preference and the coupon for "The Vanguard of Venus." If this story proves to be as good as the "Skylark of Space," then it is sure to be ranked as one of the best stories of the year. I, like Mr. Bradford and Mr. McElroy, wish that Mr. Smith would give us a sequel to the "Skylark of Space." Perhaps, you could even persuade Mr. Ullrich to give us still another sequel to "The Moon Strollers." These, however, were not the only good stories in the magazine. I would recommend the "Radio Telescope," "The Gas-Weed," "The Beast-Men of Ceres" and its sequel, "The Cry From the Ether" and innumerable others, to a person who wished to read only the best stories of the magazine.

Now as to reprints. I have often wondered if all the readers of AMAZING STORIES have read "The Treasures of Tantalus." This story ranks on a par with the "Skylark of Space" and "Station X." I am sure that a number of readers will agree with my proposal.

By the way, what has become of the estimable Baron Münchhausen and the inventive Mr. Hicks, or who has sat by the side of Alier as he received the messages of the Baron?

Now, a word of criticism. Why not change the name of AMAZING STORIES to Scientifiction Stories. The cover is perfectly all right—the fault being the title. I was attracted to the magazine by the cover. I picked it up, looked at the title and—put it back on the rack. Yet, some impulse told me to give it the "once-over." I did, and bought it. In it was the last chapter of "The Treasures of Tantalus" and I had to write to the publishers to get the preceding chapters. This story made me a scientifiction fan.

Thomas Sherred,
4303 Chatsworth Rd., Detroit, Mich.

(We doubt if we shall get any more items concerning the travels of Baron Münchhausen. There was a real person of that name and it has got into the English language as a synonym for a wild romancer. The name is spelled with two h's in the original with an umlaut over the u, but in English these are dispensed with. We shall hope to get more from Mr. Hicks however, yet some of the more seriously disposed of our readers objected to the gentleman—we think very unjustly. The magazines you mention in the last sentences of your letter are not published by us, and we have no connection with them.—EDITOR.)

(*Continued on page* 864)

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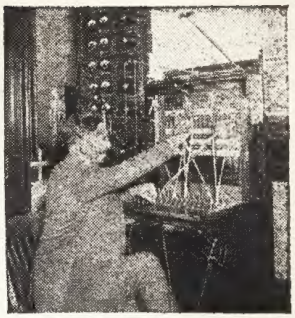

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(Largest Rare Coin Establishment in U. S.)

OUR ARTISTS COMMENTED ON. A NOTE ABOUT SCIENCE IN THE TEXT

Editor, AMAZING STORIES:

I am at present a subscriber to your fine magazine and have been reading it pretty regularly since the beginning.

* * * * * * *

I want to compliment you on changing artists. I see you got rid of Paul and I think that your artists Clardy, Hugh Mackay and Wesso can do his work equally well or better. May I suggest that you have work of each in each issue, as it lends variety and helps us to get a different view in our mind of each story's setting?

I won't attempt to criticize your stories or your cover, as you can do that better than I can, but PLEASE don't have any more reprints of Verne and ask your authors to cut out the long-winded pseudo-scientific formulæ, etc., which nobody cares for, and get down to business.

Ashby Tibbetts,
60 Main St., Bethel, Maine.

(We are now giving the name of each artist along with the title of the story, which said artist illustrates. In this way, the readers, if they wish to, can criticize our artists and tell us where they think they fall down in taking in the essence, the spirit and the scope of the story. You will not find anything wrong with the "pseudo-scientific formulas" in our stories. Many of our readers do care for these formulas, and it is hardly likely that any of them has interfered with the progress of the story.—EDITOR.)

CRITICIZING THE CRITICS

Editor, AMAZING STORIES:

I have been a steady reader of AMAZING STORIES for four years. I also have been interested in the various letters which readers have sent to "Discussions" but I, myself, have not had sufficient courage to pick up a pen and paper and write to you. While reading "Discussions" in the August edition, I noticed that you were being overwhelmed by the number of unfair criticisms. Therefore in an attempt to rescue you, I am writing to criticize the critics.

T. Projector claims that gravitation is necessary for digestion. I don't agree with him because digestion is a purely mechanical process. You don't have to think about digesting your food; it just happens if you sit, stand or lie down. No one ever taught you how to eat or digest your food. In that matter you cannot control your digestive glands and muscles no matter where you are or what you do. In plain English, it's there. As long as muscular activity is possible, digestion will take place.

I don't think criticizing critics is as preposterous as T. Projector seems to think. On the other hand, it would make discussions more interesting and it would be as interesting as joining "a red hot" debate.

Another object of my criticism is H. Ladig. He states that he didn't enjoy "The World of the Giant Ants," because it wasn't based on facts. Right now the question of insects is of the greatest importance. This very day the fight for existence is going on between two classes, i.e., man and the class of insects. The greatest brains of mankind are only able to make the fight even thus far, so we cannot tell what will happen when this class will reach a higher stage of specialization. Every day the papers contain a new atrocity which has been committed by insects or else another height of specialization which has been achieved. A race of ants which shows the same intelligence in putting out a fire as man does, has been found in France. If this can happen, I don't see what is wrong with "The World of Giant Ants."

As I am an interested zoology student, I would enjoy a few more insect and animal fantasies. I like the idea of having more and shorter stories and I certainly appreciate all that has been done to make our magazine the best.

Stanley Wolf,
Brooklyn, N. Y.

(The idea of criticizing the critics is not bad. We doubt if Mr. Ladig realized how much fact was put into the story "The World of the Giant Ants." You will have some more animal and insect fantasies in the near future. As regards gravitation and eating, in the digestive process there certainly is a good deal of uphill work. It is not simply sliding down hill. Examine the position of the colon.—EDITOR.)

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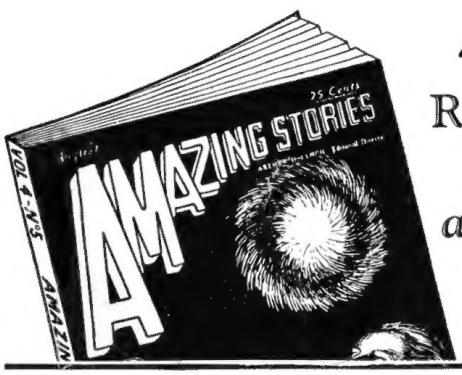

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Every Dealer Works For You as Sub-Agent
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